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# THE CENTENNIAL FORUM



# LE FORUM DU CENTENAIRE

A Symposium  
to Celebrate the  
100th Session of  
the International  
Wheat Council



Colloque marquant  
la 100<sup>e</sup> séance  
du Conseil  
international  
du blé



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A Symposium to Celebrate  
the 100th Session of the  
International Wheat Council

June 28 & 29, 1984  
Ottawa, Canada

Colloque marquant  
la 100<sup>e</sup> séance du Conseil  
international du blé

les 28 et 29 juin 1984  
Ottawa, Canada

The first International Wheat Agreement was signed some 50 years ago and in June, 1984, the International Wheat Council will hold its 100th Session in Ottawa. In recognition of the Council's important role in assisting the marketing of wheat and in encouraging international co-operation in grain matters, the Canadian Government is hosting the 100th Session and conducting a Special Symposium to mark the occasion. Speakers from all regions of the world will examine the future for grain in the Centennial Forum in Canada's capital June 28/29, 1984. Delegates from the member countries of the International Wheat Agreement, representatives from many non-member countries and invited guests from major producer groups, trade and international organizations will attend.

Le premier Accord international sur le blé a été conclu il y a une cinquantaine d'années et, en juin 1984, le Conseil international du blé tiendra sa 100<sup>e</sup> séance à Ottawa sous les auspices du gouvernement canadien, qui reconnaît l'importante contribution apportée par le Conseil en vue de faciliter la commercialisation du blé et d'encourager la coopération internationale en matière de céréales. Le gouvernement tient en outre à marquer l'événement par un colloque spécial, le Forum du Centenaire. Des orateurs de toutes les régions du globe se réuniront donc dans la capitale du Canada pour ce Forum spécial les 28 et 29 juin 1984 et se pencheront sur l'avenir du secteur des céréales. Les délégués des pays membres du Conseil, des représentants de nombreux autres pays et des invités appartenant à de grands organismes producteurs, organismes commerciaux et internationaux y participeront.



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The Great Transition by Alexander King

(President of the Club of Rome and Chairman International Federation of Institutes for Advanced Study)

Less than 6000 days separate us from the end of the century and of the millenium and in the intervening years many crucial decisions will have to be taken if mankind is to seize the enormous potentialities presented by an ever quickening tempo of scientific discovery and technological development. This will be a time of deep transition in human affairs leading into a completely different life-style and society, which will demand the maximum of wisdom which the species can muster. It will necessitate, above all, the shaping of a new capacity for the management of complexity and uncertainty to face problems which will be increasingly global in character. There will be a need, not only for a universal awareness of the interdependence of the nations, but also for the construction of new structures to give this concept an operational reality.

The central theme of the present paper is, therefore that there is an unprecedentedly bright and fulfilling future awaiting humanity if only it will reach out and grasp it, but that many difficult problems of transition and adjustment lie ahead, which collectively constitute a challenge to human ingenuity as great, if not greater than any in the history of our past.

I. Introduction

There is a deep symbolism in the concept of the end of a century and still more in the end of a millenium, which casts its mystique on to human affairs. It had been prophesied that the end of the first millenium of the Christian calendar would witness also the end of the world and this created a loss of purpose in the years which preceded it. When, however, the year 1000 was safely passed, society began to work again. There is a certain analogy here with the present mood of society, living under the shadow of the nuclear threat. The world seems at present to be operating in a "fin de millenium" psychology with many doubts and uncertainties as manifested by the innumerable year 2000 studies which have appeared in recent decades



all over the world. Now, as we approach that date, the interval has contracted so much, that projections to the year 2000 are of relatively short term significance and we must look much further ahead if we are to foresee the probable outcome of the transition.

It is impossible to foresee the future with any precision and, indeed, forecasting the future is in general a fools game. Nevertheless it is important and, in times of rapid change as at present, particularly important, to examine existing world trends in order to gain some idea of the nature of future societies and to foresee and if possible to avoid or diminish the impact of problems inherent in the trends. It is particularly dangerous to make simple extrapolations from the present, since trends are so often subject to the laws of organic growth and steep rises in the curves tend to flatten out as a result of the operation of other forces which may have been only dimly perceived. However, the self-defeating or Cassandra type of forecasting has its significance in suggesting the probable consequences of trends, in order that policies might be changed to prevent or mitigate the difficulties foreseen. This was the nature of the Club of Rome's commissioned study on "the Limits to Growth". The prophecy of Cassandra that the city (Troy) would be taken and sacked proved to be correct. Had she been a more effective policy analyst with the confidence of the decision-makers, her forecast would have been taken seriously, the Trojan Horse destroyed and she would have been proved usefully wrong.

There is, indeed, need for a systematic and continuously updated surveillance of global trends likely to impact on the workings of society. The prospective approach is especially necessary in the democratic countries where the short electoral cycle of four or five years concentrates the attention of governments and oppositions on issues of immediate concern to the voters and insufficient attention to longer-term and often much more fundamental matters. The consequence is a drift to crisis government in which palliative measures are taken to combat symptoms of deep-seated ills, rather than attack on the fundamental problems before they reach crisis level.

## II. The great Transition



All discussions of the future have to assume that the race will not be extinguished or revert to a state of primitive savagery following a nuclear holocaust. The prevention of this is likely to be a main preoccupation at least to the end of the century and, with the proliferation of nuclear weapons to many states, is bound to be a continuing threat which, by itself will necessitate either a world government or at least an effective global protection system. It has to be realized, too, that the causes of war lie deep in human nature, through qualities of greed and egoism, fear and striving for power which, projected to the scale of the nation cause chauvinism and xenophobia, dominance and violence. These qualities would not disappear should we be successful in creating mechanisms for the prevention of war and would be exercised in other ways.

Nuclear arms and other sophisticated weapons are products of science and technology and it is a sad commentary on the state of the planet that almost half of its research scientists are engaged in the devising of more deadly arms. Science and technology are both the cornucopia of plenty and Pandora's Box. Survival of society and entry to an age of plenty will depend essentially on our wisdom in the selection of new developments and recognition of their economic, social, cultural and political consequences.

The coming society will be based on technologies much more extensive and sophisticated than those of today. Its seed were generated as a result of the enormous expansion of resources for scientific research after world war two. When it is realised that some 90% of all the research and development undertaken throughout human history has been accomplished in the least few decades and that the lead-time from fundamental discovery to production on a significant scale may take upwards of 30 years, it is clear that what we see emerging now is but the tip of the iceberg. Already advanced technologies are leading to a new wave of industrial revolution which will have consequences for society even deeper than those of the industrial revolution at the end of the eighteenth century; life-styles will be radically transformed, industry will be largely automated, the nature and extent of employment will be very different from those of today and



there will be a massive shift in the international distribution of industry and labour.

Transition to the post-industrial or information society is likely to take some 40-50 years to complete. It should be a society which provides a modest prosperity and conditions of human dignity to all the inhabitants of the world, a considerable decentralization of human activity, increasing leisure time, offering rich opportunities for individual fulfillment and circumstances propitious for the existence of social justice. This utopian vision is not new; it was held by the fathers of the industrial revolution a couple of centuries ago, but it can become a reality as a consequence of the accumulation of knowledge and the power which the new science gives to mankind.

However, as we have already indicated, many problems and obstacles lie on the road to the attainment of the new society and these necessitate early identification and analysis as well as a popular and a political will to adapt to change in advance of the difficulties reaching a crisis level. Many people, no doubt, will instinctively resist the changes to some and there are likely to be extensive counter-cultural movements, rejecting the new technologies and their fruits, but one thing is certain it will be impossible, even if they wished, for countries to opt out because of the social risks involved. The economic advantages and the social benefits to be expected from the new technologies are so great that governments will have to pursue them with vigour; to do otherwise would be to remain with obsolescent and run-down economies vulnerable to competition from more active rivals. The fundamental question is whether governments, with the support of an informed public, will be capable of using the new opportunities deliberately and consciously to shape a better society, rather than passively to attempt mere adjustment, post facto, to their consequences as a matter of expediency. Such a positive approach is admittedly difficult within the present political system with its short electoral cycles and attitudes of confrontation rather than an approach to consensus.

The main motive force of change is thus, the emergence of the advanced technologies, but there are many other elements at play, not the least of which is the present explosion of population with its consequences for food production, provision of capital for infrastructure building, migration



and in many other directions. The transition period may also see some scarcity and price increase in petroleum products with the construction of a more diversifies energy system, possibly with the availability of nuclear-fusion energy towards the end of the period. There is unlikely to be any serious shortage of materials during the transition. A few of the chemical elements may become scarce and expensive but substitution will make this relatively unimportant. Materials costs could well increase considerably with increased demand from a larger population and the use of lower grade ores. More significant will be the development of a whole range of new materials with special characteristics of temperature resistance, lightness etc.

### III Population prospects and the provision of food

From the dawn of history and until about 1900, human population grew slowly to reach a total of 1.6 billion. During the present century it jumped quickly to 4.7 billion by the end of 1983 and is expected to reach 6 billion by the year 2000. An important and positive factor in this growth has been the decrease in the death rate and especially of infant mortality resulting from better sanitary condition and the eradication of disease. This improvement of the human condition is well illustrated by the following. In the first city to reach one million inhabitants, London, more people died than were born, until well into the nineteenth century, the increase coming from immigration from the rural areas. Today in the mammoth cities of the third world, despite overcrowding and, often, sub-human conditions of living, on the average 60% of the population increase comes from within. We must therefore expect that improved health and longevity will continue and probably increase further.

This extraordinary increase in our numbers comes mainly from the countries of the third world and is most dramatically marked by the teeming masses of China, which has already overtapped the one billion level and of India which will soon approach this. The population of the more affluent countries of the North is growing much more slowly and, in many cases is more or less static, indicating how, as economic conditions improve, human fertility decreases. The population explosion has, of course serious implications for the provision of food, the need for infrastructural



expansion, availability of employment, pressures on materials and energy and on the capacity of the environment to provide a sink for the absorption of the wastes of society and its industries. Employment aspects have to be taken very seriously since, in most of the countries in which population is growing most rapidly, there is already extensive unemployment and under-employment. It is calculated that there is a need to create some two billion new jobs before the end of the century.

Until about a year ago the demographers of the United Nations were forecasting that the world population would level off at between 10 and 12 billion in the middle of the next century. Recently, however, there has been a significant decrease in the fertility rates in many of the most populous countries, which should bring forward the peaking of the world population considerably <sup>(earlier)</sup> and at a much more manageable level. This recognition has led to a degree of complacency with regard to the population problems which could be dangerous and it is still inevitable that considerable rises will still take place, because the explosion of recent decades means that in many of the most vulnerable countries, the average age is exceedingly low. To take a somewhat facile illustration, a population of the size of the country of Grenada is being added to the planet twice a day at present and this is expected to continue till the end of the century.

The demographic prospects vary greatly from region to region. The advanced, industrialized countries are growing very slowly and are likely to comprise under 20% of the global population in the early years of the next century; there are some signs however that fertility rates are increasing slightly in these countries. Within some of the larger nations of this group, differential growth rates are marked. For example in the Western part of the Soviet Union, the birth rate is very low, while that in the Asian republics is high, a disparity which will have considerable consequences in a few decades. In the United States, immigration from the Caribbean and also illegal entries from Mexico are altering the ethnic pattern. Growth, still high in Latin America can be managed as there are still areas for expansion.

Harmonic growth in Asia depends greatly on the success of population control policies in India and China, but on the whole the situation in



South East Asia is likely to be stabilized, but with many local difficulties. In Indonesia, for example massive attempts are being made to reduce the population pressure in Java by repatriating large numbers of people in the outer islands. Population pressures as well as political factors in the countries of Indo-China are seen as alarming through waves of emigration, by countries such as Thailand and Malaysia and have recently led the latter country to adopt pro-natalist policies which aim to increase its population from 17 to 70 million to retain its national identity in face of expected foreign inflows.

The most sensitive region with regard to population explosion is certainly Africa where fertility rates remain very high and are threatening to outstrip agricultural output. This, together with rapid desertification and general political instability suggest that this continent will have grave problems throughout the transition period.

What then are the prospects for feeding the six billion people who will inhabit the earth by the beginning of the next century? On essentially technical grounds they are excellent. FAO projections indicate that the total of necessary carbohydrates and proteins can be produced even on the basis of existing agricultural technology and the probability of substantial technical improvement is very great. It is to be expected that the new techniques of recombinant DNA will be able to improve yields enormously as well as to upgrade the nutritive quality of grains, providing, for example, a higher protein content and with a range of amino acids which will provide a balanced nutrition. Furthermore we can, through genetic engineering, tissue culture and other techniques, hope to produce strains able to fix their own nitrogen and thus reduce the present heavy and expensive reliance on chemical fertilizers. Even on the technical level, however, there will be many local difficulties, associated, for example with scarcity of water for irrigation, salting up of good lands and, in general loss of productive soil through overgrazing, deforestation and the extension of urban areas on the best land. One recent model of the food/agriculture/energy system in the United States even suggests that that country will be a net importer of food early in the next century.



Improbable as that may be, there is certainly a great need to pay attention to the sustainability of soils to provide for the greater populations.

The real problems of feeding the expanded population are, however, not technical, but political, economic and logistic. After all, in today's world in which the total food available is adequate to feed everybody there are millions of people hungry, undernourished and mal-nourished. In fact, the hungry are poor and able to buy the food which exists and in many countries this is likely to become aggravated as population increases.

This difficulty cannot be overcome in terms of the existing distribution of wealth and of the world economic system in general. While the New Economic Order suggested by the United Nations is unlikely to be accepted by the advanced countries, very great adjustments of the existing economic, credit and monetary systems are likely to be forced by events.

Particular problems are expected to arise in connection with the rapid growth of very large cities in the Third World. Projections indicate that by the end of the century there will be many cities of 15-30 million inhabitants, led by Mexico City with 32,000,000. No experience exists as to how such agglomerations can be managed. Problems of housing, sanitation, provision of water, disposal of solid waste etc will be enormous and in many of these cities already, social problems of enormous magnitude exist as a large proportion of the inhabitants live in uncontrolled shanty towns, often alienated from the settled inhabitants of the city. Such cities frequently have little relationship with the surrounding countryside and tend to live on imported food and cook with imported kerosene, since there is often a large surrounding zone, bereft of firewood, the traditional fuel of the developing countries. As Lester Brown puts it, these cities literally live "from ship to mouth" and are extremely vulnerable, both physically and socially.

#### IV. The Environment

Environmental concern of recent years arises as a consequence of the large increase in human activity as compared with the past when its wastes could be absorbed easily by the atmosphere, the rivers, the soil and the oceans. The extent of human activity results partly from the numbers



involved and partly from the increased consumption per capita which the economic growth of recent years has made possible. In the lifetime of the present writer, total human activity has increased tenfold and a commensurate amount of waste has been spewed out into the environment. For the first time in history man is making a significant impact on his environment and the capacity of the biosphere to cope indefinitely with his wastes is in question. In the past pollution problems such as the emmisions from England's "dark satanic mills" of the last century have been strictly local; the tendency today is for such phenomena to become global and requiring international action if they are to be eliminated. Many of the existing pollution hazards are, it is true, still local and can be overcome by technical means, at a cost, certainly, but one which can be borne.

Effect on the global environment are more difficult to tackle and may be cumulative. An example is the diffusion throughout the ocean and of non-biodegradable chemicals of which DDT was the first example and, at present, the problem of acid rain is preoccupying; this phenomenon, chemically quite complex, results from the emmision from factories and power stations where the combustion of fuels of high sulphur content takes place. This cannot be tackled on a purely local basis, since its wind-borne effects are felt at great distances, for example, damage to forests and lakes in Canada from the industries of the United States Mid-West and that in Scandinavia from the chimneys of the English Midlands and the Ruhr, i.e. in quite other jurisdictions.

Great concern is expressed at present concerning the probable effects of the increased concentration of carbon dioxide in the atmosphere which has been building up since the beginning of the century. This is due partly from the burning of fossil fuels and partly from the reduction of  $\text{CO}_2$  absorption as a result of the cutting down of the tropical forests, itself an environmental degradation with possible climatic consequences. Through the so-called "greenhouse effect" in which carbon dioxide prevents the reflection of solar radiation back into space, it is considered that the further accumulation of this gas will lead to a significant warming up of the surface of the earth. Great uncertainties exist with regard to this phenomenon, especially with regard to the extent to which the oceans will absorb  $\text{CO}_2$ .



but the conclusions of a number of sophisticated models indicate that a doubling of the carbon dioxide content of the atmosphere would result in an average increase in the global temperature of between 1.5 and 4°C and that the doubling will have been reached before the middle of the next century. Furthermore the warming up will be much greater towards the poles than at the equator. Such a change would greatly alter the temperature gradients of the world causing considerable modification of wind and rainfall patterns; its influence on agricultural production would be profound. If, at that time the burning of coal and oil were to cease, it would take about 900 years for the present equilibrium to be reestablished.

This phenomenon, about which there can be no quick certainty, illustrates the difficult problems of planning in uncertainty which we are likely to face in the next century. We know too much, but not enough. Proponents of nuclear energy are encouraged by such projections to say, ironically, that coal and oil are much too dangerous to use! It is unlikely that the greenhouse effect would have a significant impact on agricultural production during the next 25 years and governments could not be expected to make radical changes in their energy policies in view of the uncertainties.

#### V. Social Impact of the new Technologies

It is not possible in a short lecture to indicate more than a few of the social and cultural consequences of the new technological developments which can already be foreseen, albeit dimly. The two main areas of advance are those of the new biology, including genetic engineering, and the innumerable applications of microelectronics. These are prominent amongst a whole series of new technologies and, indeed microelectronic developments articulate well with other advanced technologies such as glass fibre technology, satellite utilization, holography and the use of lasers and liquid crystal techniques. This cluster of new technologies differ in significance from other important developments in that they are capable of application right across the whole spectrum of economic and social activity, as was the steam engine, and thus appear to constitute a new wave of industrial revolution.



with social and cultural consequences at least as great as those which stemmed from the first. Microelectronics with its characteristics of low costs and extreme miniaturization will make it possible to add a brain and a memory to any piece of equipment devised by man and at a very modest cost. The first industrial revolution enormously enhanced the puny muscular power of men and animals in production; this new wave of development will similarly extend human mental capacity to a degree which we can now only dimly envisage.

The post-industrial or information society is already insinuating itself visibly through the spread of low-cost computers, word processors and new communication systems and is being accompanied by the decay of the traditional heavy industries. Soon we shall have easy access to the world store of information and knowledge available in every home, as well as electronic mail, video-conferencing, electronic newspapers and magazines, personal electronic banking and monetary transactions and shopping aided by television scanning of the supermarket shelves. These are but a few of the early applications to be expected.

More important however are the probable impacts on industry. For the first time, full or extensive automation, not only of individual processes but of complete manufacturing systems, difficult to achieve by mechanical or macroelectronic means becomes possible, technically and economically. Progress to this end is rapid, but still at an early stage. The robots we hear so much about today and even the next generation of "smart" robots able to see and to feel, must be seen as quite primitive devices operating at particular points of an existing line system. Much more fundamental advances will come from a new technology now emerging and termed by the Japanese mechatronics in which particular processes or total manufacturing systems are designed à fond on combined electronic and mechanical principles. The new industries will be cleaner, less-labour intensive and using less materials and energy; dangerous, dirty and repetitive jobs will disappear. They will operate in much smaller units than those of today, thus permitting a high degree of decentralization, thus counteracting city growth and permitting the arising of mixed rural-urban communities with cultural and other amenities difficult to create in country districts today. The products of these



industries will be highly personalized, offering the consumer a wide variety of designs, fittings, colours etc. impossible in the repetitive line production of today. There will be less distinction between the manufacturing methods of the different sectors and a tendency to blur the distinction between industry, agriculture and the services. It is not improbable that agriculture will become more industrialized with multinational corporations offering complete systems including fertilizers, weed killers, management advice and seeds of new varieties genetically engineered by them and protected by their patents.

The more general social characteristics of the post-industrial society are dangerously difficult to predict. The information technologies will, for instance, greatly increase the interdependence of individuals and nations through the instant availability of information; they will, however, tend to make for greater complexity of institutions and societies, already so complex as to be virtually unmanageable. At the same time they will make possible a high degree of decentralization, not only of industry and institutions, but also of power and decision-making. Equally, however, they could be used by unscrupulous leaders and governments to consolidate centralized power. The means will shortly exist for the electronic control of the activities and, eventually, perhaps the thoughts of everyone by "Big Brother" dictators and governments. The new technologies will also increase the fragility and vulnerability of society to technical breakdown, sabotage and terrorism.

There is also a danger of isolation and alienation which the information society, with its impersonal array of sophisticated equipment and the density of its entertainment and educational channels could engender by isolating the family from direct human contacts with the outside. What we fear is a creeping alienation of the individual, not the active counter-cultural withdrawal we see today, but a passive and insidious alienation with loss of human dignity and self-esteem. Put in starker terms, will the automation of a high proportion of human activities lead to the eventual automation of humankind? It could, but it need not. The corrective lies within the possibilities of a radically reformed educational system which



will harmonize the richly nurturing culture of the past with the opportunities which the leisure of the new dispensation will provide for personal fulfillment.

At present, the main controversy with regard to the early phases of the new society, centres on the employment issue. There are some who argue that the upsurge of information technology and the automation which it makes possible, will follow the traditional pattern of earlier technological innovations in creating new products, new industries generating economic growth, new markets and hence more employment, or else that the redundancies resulting from automation will be absorbed by expansion of the service sector. Others feel that the situation is inherently different from that of earlier developments and is likely to provide considerable economic growth without creating jobs, thus giving rise to endemic unemployment. For the moment there is little evidence of loss of employment in a particular country which can be ascribed directly to technological developments in its industry, but it is probable that some of the present unemployment is due to loss of competitiveness on the international markets resulting from rapid automation elsewhere. Put more crudely, jobs may be lost in Europe and created in Japan. It is thus to be expected that the new technologies will considerably aggravate competition in international trade and no remedy is to be found through protectionist policies or subsidies. The only sure policies will be those aimed at increasing the productivity of industry in terms of both manpower and capital utilization. Thus there may well be conflict between the need to reduce unemployment and that to increase rates of growth of productivity and innovation.

Over the longer period of the transition, although the automation of industry will create new products and new fields of manufacture it seems inevitable that the numbers necessary to operate industry will diminish greatly, much as was the case in agriculture over the last two centuries. It is unlikely that the redundancies can be mopped up by the service sector as we know it today, because secondary and tertiary sectors will be automated simultaneously. We are likely to see, rather, a gradual merger of the productive and service functions and a combination of these in the occupations



of the average individual.

Concepts of employment, unemployment, underemployment and leisure are heavy with moral and historical values involving the work ethic. In a situation where large numbers of people are no longer required in the work force, not as a result of cyclical fluctuations, but because society requires and technology makes possible very high levels of manpower productivity, these values become less significant and the words begin to lose their meaning. This suggests that in the future the chief concern of the individual may be less employment as we understand it today, but occupation in the larger sense, which will include, certainly time spent by the individual in contributing to the economic needs of society and for which he or she is paid, but also activities, self-chosen which provide personal fulfillment. Thus the occupation of the individual will have to be seen broadly as including a proportion of productive employment in the traditional sense, but presumably occupying a much smaller part of his life (late entry, more education, shorter hours, earlier retirement, periods free for further education and training) together with one or many subsidiary occupations of a craft, educational, artistic, sports or other nature. The secondary occupations would be encouraged, organized and made freely available on a local basis with tools and courses of instruction provided indirectly by the state on a completely voluntary basis, it being recognized that it is in the interests of society as a whole that a wide range of interesting and constructive alternatives is available to meet the diversity of human needs and to avoid the creeping alienation to which we have referred.

This scenario is not so radical or so improbable as it might seem at first sight. If the automation of industry and office work does indeed generate great and intractable problems of unemployment and if organized labour recognizes that it cannot, as a matter of long term self-interest, reject the process of automation, negotiations will follow, in which governments as well as unions and employers will participate, towards the equitable distribution of work through shorter hours, earlier retirement and other means so as to prevent the existence of an unacceptably large pool of permanent



unemployment. A multitude of new issues arise out of this concept not the least of which would be the need to work out a new basis for the distribution of wealth, giving rise to interesting ideological considerations.

#### VI. Disparities and Governance

For the last three decades there has been considerable concern about the disparities between the rich and the poor countries and the difficulties of the latter in achieving development. Despite considerable aid and loan programmes the gap between them has not narrowed, although some countries such as a few of those of South East Asia (the NICS; newly industrialized countries) have flourished. This is the so called North/South issue, now in impasse, with many of the developing countries having accumulated a crippling indebtedness. On the whole technological development has tended to increase the gap and the new wave is likely to continue this. During our transition period there is therefore, a high probability that large variations of economic level will persist. Moreover the active pursuit of high levels of productivity through microelectronics and the like, will probably, through changes in the pattern of international trade cause greater differences in the levels of economic performance between the presently industrialized nations.

It seems unlikely that existing North/South approaches will succeed and new means will have to be sought. The very term "developing countries" or "Third World" has lost its meaning. Countries within this classification include a broad spectrum of conditions from those of the rich oil-producing nations and countries such as Brazil and Mexico with considerable resources and development to the poorest of the poor, lacking the potential for development and economically unviable small island states. Almost every pronouncement concerning the developing countries therefore becomes a generalization which applies to only a few members of this category. With increasing recognition of the reality of the increasing interdependence of countries it would seem more useful to consider the development prospects of all nations in a region, those which are rich and industrialized as well as those living essentially at the level of subsistence agriculture and to plan development on this basis of enlightened self interest and interdependence of them all. This would probably necessitate consideration



and organization on a region by regional basis in contrast to the total international approach through the United Nations as at present, with, of course effective mechanisms for consultation, coordination and exchange of experience between the regions. The regional approach is desirable in addition because of the intrinsic heaviness of the fully international negotiation between some 156 countries. Measures and projects tend now to be accepted because they are harmless, because national needs are so varied that it is difficult to find topics which are useful to all. In some regions such as Latin America, there would appear to be sufficient homogeneity of interest to provide practical possibilities for regional cooperation based on interdependence despite political differences. In other regions such as Africa such cooperation would be much more difficult to achieve.

One region of particular interest in this connection is that of South East Asia and the Western Pacific where the ASEAN countries are making considerable progress and where advanced countries such as Japan, Australia and New Zealand have every incentive to cooperate. It is probable, indeed that this region will become the main focus for development and growth during the transition, to the detriment of the European industrial region.

Such questions suggest that there is a need for reconstruction of the United Nations system, some of whose agencies are, in any case, grinding to a halt through over politicization and excessive bureaucracy. The emergence of the global problems demand a more incisive and better informed mechanism for collective action.

While the approach to the global society suggests the need for reform of the international institutions, an equal requirement exists at the national level if countries are to evolve smoothly into the new conditions. The structures, procedures and policy mechanisms were created for earlier, simpler times and have remained virtually unchanged over a century. They seem to be incapable of facing up to problems of a new type sufficiently rapidly and there is urgent need to consider innovative approaches in institution building and operation. These considerations apply also to the political systems of all countries, where the need is to move from approaches of confrontation to government by consensus and the adoption of more prospective attitudes. All in all, the problems of governance must be given priority



attention if the new conditions are to be fully mastered.

To sum up; despite the dire perils with political and ideological polarisation present for the survival of human society, the present world situation provides possibilities not too distant for an enormous improvement of the human condition and for the fulfillment of the individual. We are on the threshold of a global society in which national sovereignty is being rapidly eroded by practical developments. There is likely to be a long transitional period before we can enter fully into an utterly different type of society and we have as yet insufficient sense of common and enlightened self-interest to provide the common thrust of humanity necessary to exploit the possibilities to the full. In addition we shall have to devise new institutions, new mechanisms and probably new ideologies if we are to succeed. It is a period of maximum danger and maximum promise and hence there is an unprecedentedly important challenge to the present generation to start the process of political and social change so as to guide the momentum of technological and other trends to the benefit of mankind rather than to be their victim.



# THE CENTENNIAL FORUM LE FORUM DU CENTENAIRE

FUTURE ROLE OF TECHNOLOGY WITH RESPECT TO GRAINS  
WITH SPECIAL EMPHASIS ON WHEAT  
BY  
CLIVE JAMES  
DEPUTY DIRECTOR GENERAL, CIMMYT, MEXICO

Mr. Chairman, honored participants, as a Canadian working for the International Maize and Wheat Improvement Center, usually known by its Spanish acronym, CIMMYT, I am grateful for the opportunity to address this Centennial Forum. The challenging subject that I have been asked to discuss is the future role of technology for increasing wheat production. Since experience of the past is often one of the best indicators of what may be possible in the future, I plan to first present CIMMYT's assessment of the role that technology has played in increasing wheat production in the developing countries in the past two decades. In doing so, I will briefly talk about the Center, review recent wheat production and consumption trends in the developing world, and then share with you what I feel is the future role of technology for increasing wheat production.

### The CIMMYT Mandate

CIMMYT is a nonprofit, autonomous agricultural research institution dedicated to supporting and complementing the research and production efforts of developing countries in two of the most important cereal crops: maize and wheat. The Canadian International Development Agency, CIDA, and the International Development Research Centre, IDRC, are both donors to CIMMYT and to the Consultative Group for International Agricultural Research (CGIAR) of which CIMMYT is a member institute.

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



CIMMYT's primary research thrust is to develop new and superior germplasm of maize, wheat, and triticale with broad adaptation and the potential to produce high and dependable yields over a wide range of production conditions. Crop production research issues are also of increasing importance in the research agenda. Our mandate is global and involves collaborative ties with virtually every maize and wheat producing country in the world - approximately 125 countries.

By operating the largest international testing networks in the world for wheat and maize, through which germplasm and information is freely exchanged, CIMMYT has facilitated the integration of the research work of thousands of scientists and hundreds of organizations worldwide. This has led to an acceleration of research efforts and has resulted in the release of hundreds of high-yielding maize and wheat varieties with broad adaptation and yield dependability in both developing and developed countries.

#### Recent Trends in Wheat Production

Let me now turn my discussion to recent trends in wheat production. At present there are 29 developing countries that produce wheat on more than 100,000 hectares. Ninety-three percent of the developing country production is concentrated in five countries: China, India, Turkey, Pakistan and Argentina. Increases in wheat production in these five countries over the past two decades have been remarkable. The late Dr. Glenn Anderson, a Canadian and former Director of the CIMMYT Wheat Program, served as one of the field commanders of the Green Revolution in India, where wheat production has more than quadrupled over the last two decades; and average yield levels have more than doubled. In China, the world's third largest wheat producer, production has more than tripled. Pakistan has experienced a



doubling in national production and in average yield levels. More recently Bangladesh, whose national wheat program receives support from a CIDA-funded CIMMYT program, has experienced a 12-fold increase in national production over the past ten years through the introduction of early-maturing, high-yielding varieties.

Improved technology is a major factor that accounts for wheat's leading production performance among the cereal grains over the past two decades. The high-yielding dwarf spring wheats, developed by <sup>my colleague</sup> the Nobel Laureate Dr. Norman Borlaug and ~~his colleagues~~ have had a major impact. Today, there are nearly 40 million hectares in the developing world and up to 10 million hectares in the industrialized countries that are sown to these high-yielding varieties. It is conservatively estimated that genetic improvement alone has increased yield by 200 kg per hectare and adds 10 million tons annually to world wheat production worth <sup>ca 2.3</sup> approximately \$~~US~~<sup>ca 2.3</sup> 75 billion per annum. This is sufficient to provide approximately 70 million people in the developing world with 65 percent of their annual caloric consumption.

#### Recent Trends in Wheat Consumption

Over the past 10 years, the average demand for wheat for all uses in the developed countries has leveled off at about 200 kg per capita per year. Developing countries have a per capita utilization of <sup>about</sup> 60 kilograms per year but it is rising fast. Wheat has become one of the single-most important sources of calories and wheat demand has increased by about 75 percent over the last ten years; a phenomenal 5.4 percent annual growth rate; were it to continue at this pace, it would result in a doubling of Third World demand for wheat in the next 15 years! Indeed, roughly two-thirds of the 44 million ton increase in world wheat trade over the last decade has been destined for the developing world.



## The Implications of these Wheat Trends for the World

To date, most of the benefits of improved wheat germplasm have accrued geographically to the major producing countries, and biologically, to the more favored environments in terms of soils and moisture availability. In recent years, however, wheat production by the major producers has tended to stabilize. Since these countries already have a high percentage of their wheat area in high-yielding varieties, and the growth in irrigation has slowed, it seems unlikely that developing country production growth rates in the 1980s will be as high as in the past decade.

While we cannot neglect the more favored environments, where substantial yield improvements are still necessary and achievable, it appears that the major unexploited production gains to be made through the application of new technology will be in the more marginal wheat environments in both the traditional and non traditional wheat producing countries. but particularly in the developing world.

The significance of increased wheat production in the more marginal agricultural areas is an especially important dimension in feeding future generations. Some 600 million people live in the semiarid tropics and more than one billion live in tropical and subtropical areas characterized by serious biological constraints. However, I must caution that agricultural research alone cannot produce miraculous improvements in many of the more marginal production areas. Some of the biological limitations are simply too overpowering for science to currently overcome. Still, we can, and must attempt to develop improved technology to solve a number of the problems that face the marginal land areas.



Defense of Gains--Before describing various efforts to develop new technology, I should mention an important reality which confronts the ~~plant breeding~~ research community and which <sup>privately, and</sup> requires the understanding of those who decide on research budgets. The pests and diseases that have attacked wheat for ~~millenia~~ continuously mutate to produce new races that can attack previously resistant varieties. This mutational ability is an evolutionary defense mechanism that ensures the long-run survival of these organisms. Thus, these crop pathogens and pests will be with us for posterity, and represent a constant threat to food production. Coping with this threat requires a substantial and continuous plant breeding effort to defend the gains in food production made in recent decades. This will always be an essential part of any breeding program and this kind of research is no less important than that aimed at raising genetic yield potential, and is every bit as deserving of research funds.

#### Improving Yield Potential and Closing the Yield Gap

The theoretical maximum potential yield for wheat is estimated to be about 20 tons per hectare (<sup>about 300</sup> ~~some 297~~ bushels per acre). This theoretical maximum is based on growing the ideal variety under optimum radiation and agronomy, with no limitations of moisture, soil fertility and no crop pests. The record yield so far obtained in a farmer's field was set in the early 1960s in the State of Washington at 14.5 tons per hectare, about 75 percent of the theoretical maximum. The average world yield is about two tons per hectare, which is only 10 percent of the theoretical maximum yield.

Whereas efforts must continue to increase the maximum yield potential under field conditions, one of the most promising ways to achieve increased production of wheat, particularly in the developing world, is to reduce the gap



that exists between the maximum yield potential under field conditions and the average yield that is actually obtained.

Reasons for this yield gap constitute a familiar litany including problems of soil infertility; poor weed control; lack of fertilizer and herbicides, and losses of soil and residual moisture because of inappropriate tillage practices.

Resolving the yield gap will require a number of approaches. Most importantly, perhaps, is the conducting of extensive on-farm research programs designed firstly to help researchers understand the existing farming systems and their inherent problems, secondly to allow the testing of alternative technologies and practices under farmers' conditions, and thirdly to promote the development of a mix of technological recommendations appropriate to the system in which they are to be applied.

### Improving Yield Dependability

Given the large yield gap between experimental and farm-~~based~~ yields, more research attention should be given to overcoming the environmental and disease stress problems that still thwart the production efforts of most of the world's wheat farmers. A number of research thrusts are under way at many wheat research institutions throughout the world, including CIMMYT, to increase the yield dependability of wheat grown under various stress situations.

Drought Tolerance--Inadequate moisture is one of the world's most pervasive wheat production problems. More than one third of the total area in developing countries consists of semi-arid environments in which available moisture constitutes a primary constraint on wheat production. A concerted effort must be made to develop wheat varieties



with greater tolerance to drought. The germplasm derived from crosses of spring and winter wheat which I will talk about later, is showing a significant increase to drought tolerance. Some of these new varieties are capable of yielding up to 3 tons per hectare under considerable drought stress whilst still retaining the capacity to yield up to 11 tons under optimal irrigated conditions.

Earlier Maturing Wheats--Another important research effort involves the development of a broader range of earlier maturing wheat varieties. Such materials are needed where there is a short growing season available for wheat cultivation or where farmers seek to intensify their cropping systems, such as the rice/wheat rotations increasingly practiced in South Asia. This could be a very important development which will allow us to increase biomass production per unit of time.

Tolerance to Mineral Toxicities--It is estimated that highly leached acidic soils characterized by toxic levels of soluble aluminum may cover as much as one billion hectares in tropical and subtropical areas of Brazil, east and southeast Asia and central Africa. Currently, areas with acidic soils high in soluble aluminum are either undeveloped for agriculture, or, where cultivated, are generally unproductive. Through a cooperative program with Brazilian institutions, a number of high-yielding bread wheat lines have been developed with tolerance to the higher levels of free aluminum. These varieties yield up to twice as much as the currently available varieties grown in Brazil's wheat production areas with acidic soils.

Fuller Exploitation of Genetic Variability--Today, most plant breeders focus their activities on making crosses between different strains of wheat within the same gene pool - that is cross a spring wheat with a spring wheat. An



alternative approach which has been used for many years but still has a lot of potential is to utilize the variability of both the spring and winter wheat gene pools. CIMMYT's new Veery lines, derived from a cross of a Russian winter wheat Kavkaz, and a CIMMYT spring wheat, are now setting record yields in many parts of the world, and over a surprisingly wide range of environments.

For the last four years, a Veery line was the top performer across more than 40 locations worldwide. It yielded 12 percent better than Pavon 76, one of CIMMYT's highest yielding spring wheat varieties. Veery even outyielded the best local check varieties at 70 percent of the individual locations, an indication of its very broad adaptation. Given the significant potential benefits of the spring x winter work for all wheat-producing countries, I believe more research in this area is definitely warranted.

Introduction of Alien Genes--Another approach to increasing the yield potential of wheat is to transfer useful genes through wide crosses from related genera, such as wild grasses, to wheat. The focus of this kind of wide cross work is not the improvement of genetic yield potential per se, but rather more dependable and increased yields through better resistance to pests and diseases and greater tolerance to environmental extremes.

CIMMYT's first major involvement in wide crosses was with triticale, a program that was funded by Canada and headed by a distinguished Canadian scientist, Dr. Frank Zillinsky. Our continuing work on triticale is motivated by two major considerations. One is the observed capacity of triticale to perform better than wheat under a number of environmental stress conditions. These include acid soils, cool highland temperatures, and certain heavy disease-stress situations. In such environments, triticales can



considerably outyield our normal wheat materials. The second major factor which may be of critical importance in increasing yield potential is the greater total dry matter production of triticale compared with wheat. A further partitioning of this biomass to grain could push triticale to a higher genetic yield potential than wheat.

Research to cross domesticated species of wheat with related wild species and grasses is another very promising research avenue that may lead to the development of varieties with greater yield potential and dependability in a number of important marginal areas. Generally, such wide crosses involve the breaking down of natural barriers between plant species in order to introduce useful genes from alien genera into domesticated crop species. A number of wild species have been identified with greater resistance to certain diseases, insects, tolerance to salinity, temperature, and moisture stresses. Successful introgression of these desirable genes can lead to new varieties with greater tolerance to environmental stresses.

The program to introduce alien genes is of a long-term nature and the research is more basic than the principal thrust of many of today's applied research programs. However, it is noteworthy that many of the techniques developed in molecular and cellular biology are particularly suited for application in this type of program. For example, the sophisticated molecular probes that are being developed can be used to detect very easily the introduction of minute amounts of alien genetic material. Transforming DNA techniques can also be used to introduce alien traits. To benefit from these new techniques CIMMYT has already, through collaborative research, developed a consortium that will allow the transfer of technology between the more basic research institutes in the developed countries specializing



in various aspects of biotechnology and the alien gene program at CIMMYT.

In some scientific circles today, there is great euphoria that major production benefits will soon be forthcoming from the use of genetic engineering techniques. The new techniques in tissue culture, cell fusion, and DNA transfer are being heralded as the scientific answers to increasing the breadth, level, and stability of disease resistance, eliminating the need for conventional chemical fertilizers, and achieving major breakthroughs in raising the maximum genetic yield potential.

Although great success has been made by employing genetic engineering techniques with lower organisms, it will take time to obtain similar results in crops such as wheat. Nevertheless, if science is to advance we must combine forces using new techniques to attempt to overcome the barriers that currently exist. In predicting the impact of biotechnology on future wheat production we must be careful to refrain from overoptimism because not only could this lead to unnecessary disappointment, <sup>and erosion of credibility</sup> but more importantly to the discontinuation of work that in the long-term could lead to important breakthroughs. I am hopeful that if the biologist and the molecular scientist work together with prudent planning and, in the spirit of cautious optimism, they can develop techniques that will result in improved technology which will benefit mankind.

### Conclusions

Socrates believed that "one mark of a statesman was the knowledge of how much wheat was required to feed the population of Athens." Socrates' statement is even more relevant today for the statesmen, politicians, policy makers and scientists here at this forum. We have the much more <sup>today</sup>



complex and critical task of assessing the wheat requirement, not just of Athens, but of today's world with almost 5 billion people.

Clearly, great strides have been made in wheat production over the last few decades. Much of this success, both in developed and in developing countries, is the direct result of investments in agricultural science which have resulted in the development of improved technologies. It is also clear that wheat demand has increased significantly, and that this demand is rising at a rapid rate in the Third World.

*and the International Council*

While the developed wheat-exporting countries must continue to play a vital role in meeting this growing demand, wheat production in the Third World must increase as quickly as possible to help stave off widespread hunger and social unrest. CIDA has long recognized this fact and is implementing research projects to increase wheat production in Kenya, Tanzania and Bangladesh. <sup>Food aid will continue to be essential but</sup> Minister Whelan, in his role as President of the World Food Council, has also called for increased assistance for food production in the developing world, recognizing that this is the only lasting solution for the millions that suffer from hunger and malnutrition.

Past successes give a clear indication of the potential contributions of agricultural research and technology. In the future, I believe that even larger investments will have to be made in agricultural research. In all likelihood, however, the rapid gains in production of the past two or three decades will give way to a more steady and incremental pace. Even so, the demands of a growing world population for increasing amounts of food make all possible advances in food production absolutely imperative.



Despite the forbidding world food/population dilemma that we face, I remain both convinced and hopeful; convinced that agricultural science can help us meet our future food production needs; hopeful that the large, long-term investments necessary for agricultural science to develop new technology will be made by those institutions and governments throughout the world who are aware of their absolute necessity.



Figure 1

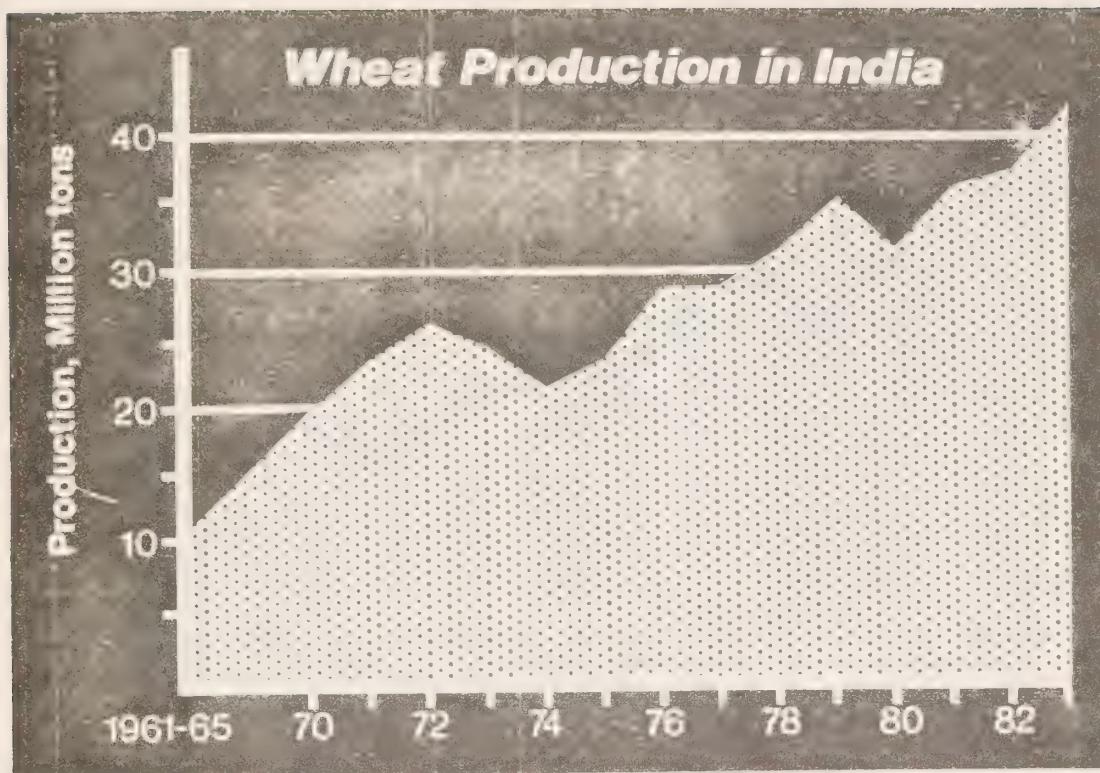


Figure 2

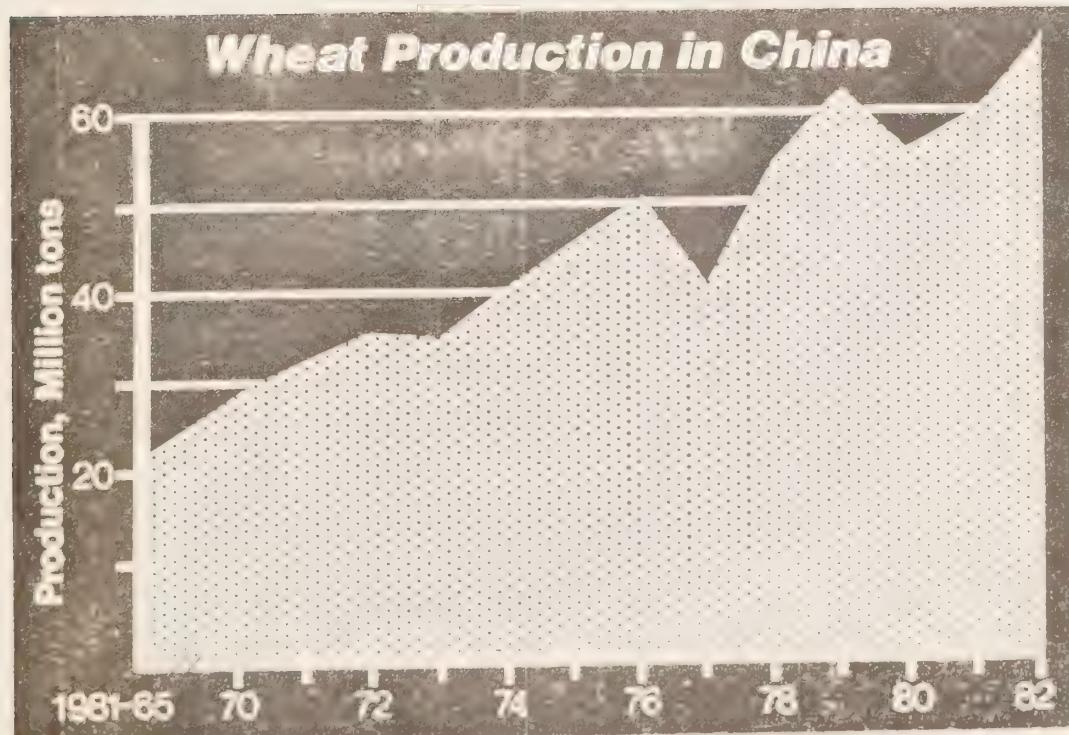




TABLE 1

**International Spring Wheat Yield Nursery,  
1981-82**  
(mean yield, 41 locations worldwide)

| <b>Veery</b>      | <b>Pavon 76**</b> | <b>Best Check</b> |
|-------------------|-------------------|-------------------|
| ----- Kg/ha ----- |                   |                   |
| <b>4982</b>       | <b>4432</b>       | <b>4582</b>       |

**\*\* CIMMYT spring wheat variety**



TABLE 2  
**Triticale Compared to Wheat**  
**International Triticale Yield Trial, 1981-82**

|                    | Best Triticale    | Best Wheat |
|--------------------|-------------------|------------|
|                    | ----- Kg/ha ----- |            |
| Kenya, Rift Valley | 6233              | 5479       |
| Mexico, Guanajuato | 8499              | 4703       |
| Chile, Chillan     | 5771              | 3354       |
| Brazil, Brazilia   | 3737              | 881        |

FIGURE 5

**Yield of the best CIMMYT triticales as a percentage of its best bread wheats**

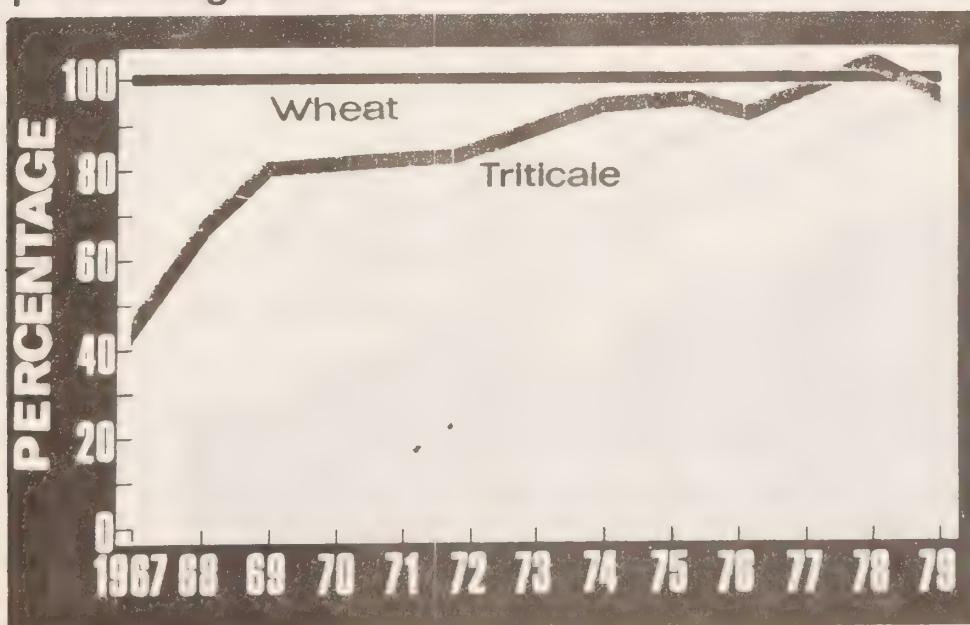




FIGURE 6

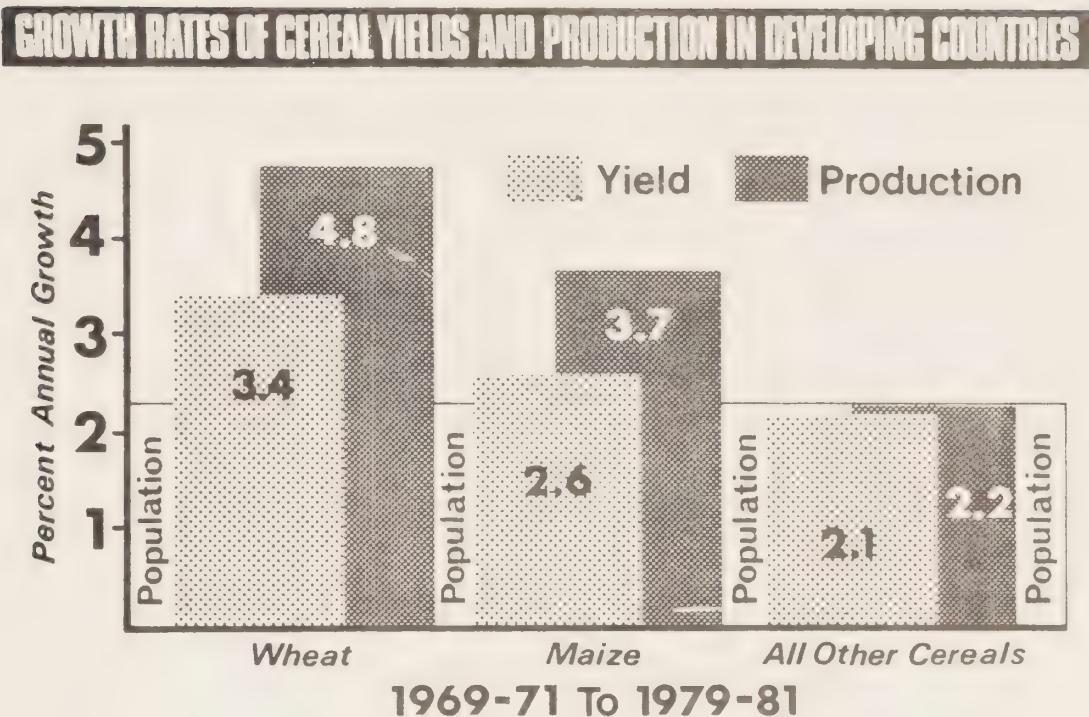
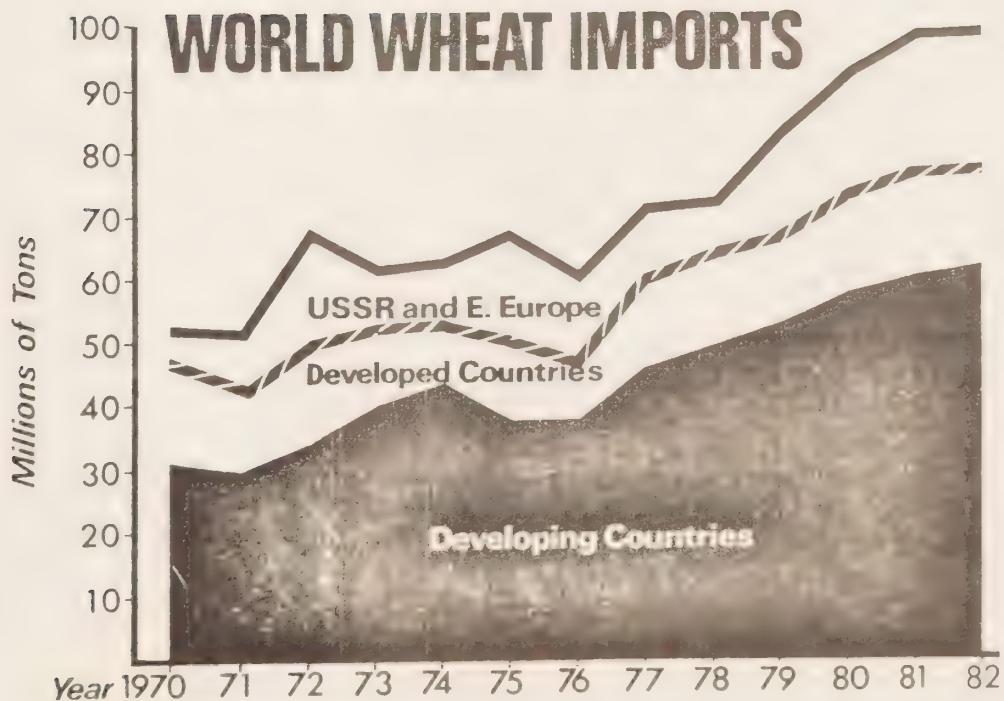


FIGURE 7





## INTERNATIONAL FINANCE AND THE GRAIN TRADE

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World Bank

June 27, 1984



The world food system, of which the grain trade is the backbone, has evolved rapidly and changed in many ways over the past two decades. These changes cannot be separated from--and in fact are an integral part--of the adjustments that have transformed the international economy. My purpose here is to examine some of these trends and to relate them to the grain trade, especially as it relates to developing countries. The major structural changes at the global level include the growth of trade, the emergence of an integrated global capital market, shifts in the exchange rate regime, and changes in the grain trade. All of these combined have changed the policy environment within which the global food system works.

#### Growth of Trade

Trade has provided the economic engine for the high GNP growth that has characterized the last 40 years. It has long been understood that a prerequisite for growth is demand, and for all countries, and the developing countries in particular, a supplementary demand can only be found by trading. The consequences of a collapse of global trade such as those which characterized the 1930's is well known. The International Wheat Council grew out of the disarray that accompanied this collapse some 50 years ago. This experience led to the creation of various other international trade and finance organizations, including GATT, the International Monetary Fund and the World Bank, as the instruments through which a global trading system was to be fostered.

Partly as a result, the volume of trade has expanded enormously, and the world has become increasingly well-integrated through trade in the



post-World War II period. Growth in trade has exceeded GNP growth in all but three years (two of these being in the 1980's during the current recession). This is nowhere more in evidence than in the grain trade which more than doubled in the 1970's from 120 mmt in 1970 to 260 mmt in 1980. A major consequence of this trend is that virtually all economies, planned and market alike, have become increasingly open to trade. For instance, the openness of the US economy, in terms of the share of demand derived from trade, increased from 13 percent in 1970 to 27 percent in 1979, and has more than tripled since 1965.

One consequence for any country of a more open economy is that a larger share of its economic activities are beyond the reach of domestic economic policies. This is a point of major frustration for policy makers in many countries.

#### Emergence of a Global Capital Market

International capital markets at the end of World War II were virtually non-existent but the volume of credit outstanding in this market is now vast - recently estimated at US\$ 1.7 trillion. The important thing about this market is that it links the national economies of the world in ways that are just as important as the linkages through trade. Similarly, it links the economic policies of the nations of the world. Moreover, this market is almost wholly outside direct government control or the control of international agencies such as the IMF.

Reliance on these credit flows has been a major factor in the high growth rates achieved by developing countries, particularly in the face of increasingly difficult external trade and balance of payments circumstances (created by the 'oil shocks' of 1973 and 1979 as well as



other factors including the severe industrialized country recession during the early 1980s. As a result, outstanding debt of developing countries grew at almost 40 percent per year in the 1970s, from about \$4 billion in 1970 to \$136 billion in 1980.

The benefits from foreign borrowing are fourfold: it supplements investment; it smoothes cycles in national income; it eases adjustment to permanent income loss; and it meets the transaction needs of trade. At times of restrictive monetary policies by the larger economies these borrowings become expensive, or even impossible to arrange. In these circumstances there is reason for concern in that the, mainly short-term, flows, needed to finance trade may be impaired to the disadvantage of the market trading nations--a problem which has recently affected international grain trading. It is in this respect that the IMF is of some importance. The availability of Fund resources ensures that balance of payments difficulties can be buffered by medium-term borrowings provided that necessary, if often painful, policy adjustments are undertaken to ensure a return to long-run external balance.

#### Shifts in the Exchange Rate Regime

Beginning with the Bretton Woods Convention in 1944, it was agreed that the international monetary system would operate with, inter alia, a fixed exchange rate system. Once agreed to, these exchange rates were changed only in special circumstances. Imbalances in external accounts were to be corrected by changes in domestic policies - tighter fiscal policies or stimulating the economy. This was adopted largely to avoid beggar-thy-neighbor competitive devaluations which characterized the 1930's.



But today the world economy operates on a floating exchange rate system. Recent estimates suggest that 85 percent of world trade takes place across flexible exchange rates. In many ways the most important aspect of the new exchange rate regime is what has not occurred. First, market forces alone have not successfully kept short-run exchange rates within expected 'economic' ranges--"overshooting" has become a major problem. There has been substantial instability and, more seriously, prolonged periods of imbalance such as the current relative over-valuation of the dollar. But second, chronic instability has not led to sharp reductions in world trade.

This shift to a system of flexible exchange rates was a significant change in the working of the international economy, especially in relation to the emergence of a well-integrated international capital market. It changed in a substantial way the manner in which changes in marketing policies effect an economy. The full significance of these changes may not yet be sufficiently well recognized.

• This can be illustrated by considering the consequences of a major change in a major trading country, such as the US. Suppose the US decides to follow a tight monetary policy (deflation). Prior to 1973 this would cause higher interest rates and constrain consumption and investment. Now as interest rates begin to rise, capital flows into the country (or flows out at a slower rate) and this in turn causes an increase in the value of the dollar. This causes their exports to be less competitive and chokes off the export sectors. Those dependent on imports of commodities or products from the US, on the other hand, are faced with higher prices for those imports.



### Changes in the Grain Trade

These changes in the world financial system have also had a profound impact on the grain trade. Particularly in the last few years, when grain trade levels have stagnated or declined, it has become apparent that the international food economy has become an interdependent link in a very much broader trade and financial system. Grain price movements are now as dependent on changes in foreign exchange or interest rates as on harvest sizes. And the prolonged liquidity crisis of the high-debt middle income developing countries have had dramatic repercussions on the level, structure and prospective growth of the grain trade.

At the outset it should be emphasized that the impressive increases in grain exports achieved in the 1970s were driven principally by corresponding increases in income. It was unprecedented growth in demand that drove the grain trade. Per capita production in almost all major importing countries continued to grow--but not fast enough to keep pace with income driven increases in consumption. In countries like the USSR the key was higher per capita meat consumption which, in turn, fueled higher levels of feed utilization. In many of the middle income countries rising urban populations and incomes led to shifts in food consumption, with wheat products becoming increasingly popular (even in traditional rice eating countries of East Asia or tropical areas of South America and Africa where wheat cannot easily be grown domestically).

Another important example of the link between changes in the international economy and the grain trade is reflected in grain price variability. Year to year changes in grain prices became greater in the 1970s and early 1980s as compared to the 1960s or 1950s. This was in line



with a more general trend towards greater price instability affecting all primary commodities (grain prices were in fact relatively less unstable than those of other primary commodities such as coffee, copper or oil). Obviously the variability of grain import prices--as well as export commodity prices--has greatly complicated the task of economic management in many individual developing countries. But higher price instability was not related to any significant increase in production instability--available data shows that grain production was actually a bit less variable in recent years. Further, increased prices are not necessarily related to global crop shortfalls; during the largest production shortfall occurring in the 1972-82 period, real world grain prices actually declined (in 1974-75). And most important of all, increased price variability did not have a significant affect on exporter supply responses or importer counter demand.

#### Implications for Policy

What then was the cause of higher grain price volatility?

Clearly much of the explanation relates to government support programs. For example, the US decision to liquidate government stocks in 1972 helped bring about the almost three-fold increase in 1973 grain prices (albeit short lived). The more recent PIK program has a similarly large impact. On a global basis it should be remembered that huge resources are devoted by most developed countries to subsidizing domestic farm sectors. By the early 1980s, the US, EEC, Japan and USSR were spending about \$160 billion annually on agricultural and food subsidies--almost double the value of agricultural exports by all developing countries. In particular, the policies of the EEC and USSR, which tend to insulate their domestic feed



economies from rising international prices, have in the past helped exacerbate the price effects of production shortfalls.

But in recent years the changes in foreign exchange and interest rates have also become major factors in grain price formation. High real interest rates have had the affect of doubling the cost of stockholding grains (as compared to the costs in the 1960s). This in turn has been translated through the workings of the futures markets and normal crop price relationships to changes in international prices--although such increased variability has been largely predictable, hedgeable and not particularly de-stabilizing. And exchange rates have, since the advent of the floating rate regime, been a major factor in determining grain price changes (and market shares). For example, a strengthening US dollar has been closely tied to softening grain prices and vice-versa (with the notable exception of the 1983 PIK-drought induced price run-up). A graphic illustration of how macro-economic factors can be-devil government grain trade policies are US efforts to promote increased grain exports as a way of solving problems associated with mounting domestic farm surpluses and declining farm incomes. Despite massive outlays on trade promotion and credit the US share of grain markets has fallen significantly since 1980--largely because an appreciating dollar has made US grain exports less competitive. In fact, the USDA has estimated that a 20 percent rise in the value of the dollar over two years would cut US exports of grains by about 16 percent.

The recent slow-down in overall grain import demand has also been a by-product of macro-economic developments that extend well beyond the agriculture sector. The economic recession of the industrialized countries



has been accompanied by a series of liquidity crises in major middle income developing countries which had, up until the early 1980s, been the fastest growing markets for grain imports. But the virtual elimination of incremental capital flows to countries like Brazil or Mexico has set off a series of events leading to drastic falls in domestic incomes on a par with those which occurred in the US during the Great Depression of the 1930s. It is not therefore surprising that for the first time since the early 1960s, the volume of grain imports has remained virtually stagnant for three years running. And the trade which has continued, is increasingly dependent on extra-market exporter supplied trade credit.

#### Future Prospects

There is nothing on the horizon to indicate that the recent linkage between the world financial and grain systems will become less important in the future. While it is instructive to recall that past predictions about grain trade developments have seldom proven useful, it should nonetheless be possible to summarize briefly the key variables which will determine future developments. First, assuming that there is no return to a system of fixed exchange rates, grain price volatility will remain a feature of trade although price variability need not bring serious economic problems. Second, a return to a trend of growing grain exports is possible only if developing country incomes begin rising--and this will require increased overall trade levels and incremental capital transfers as well. Third, the costs of current grain subsidies in the industrialized countries will continue to grow in economic and political terms over the coming decade. While by no means certain, this could lead to important reforms which could have important trade consequences.



THE CENTENNIAL FORUM



LE FORUM DU CENTENAIRE

24/06/84  
TRENDS IN GRAIN MARKETS  
AND MERCHANDISING

BY M.R. LASERSON,

EXECUTIVE VICE PRESIDENT,

WORLD GRAIN DIVISION

CONTINENTAL GRAIN COMPANY

REMARKS PRESENTED AT THE CENTENNIAL FORUM,  
INTERNATIONAL WHEAT COUNCIL  
OTTAWA, ONTARIO, CANADA  
JUNE 28, 1984

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



WHEN I WAS ASKED TO JOIN THIS DISTINGUISHED GROUP ... INCLUDING NOT ONLY THE SPEAKERS PRESENT, BUT EQUALY IMPORTANT, THIS AUDIENCE... I EXPERIENCED A STRONG SENSATION OF HAVING BEEN PRESENTED A SPECIAL OPPORTUNITY. IT IS NOT OFTEN ENOUGH THAT FORUMS ARE PROVIDED FOR THE INTERNATIONAL GRAIN TRADE TO MEET TOGETHER. I ADD MY CONGRATULATIONS TO THE ORGANIZERS OF THIS SYMPOSIUM.

RECENT TRENDS IN GRAIN MARKETING ARE, UNFORTUNATELY, TOO EASY TO CATEGORIZE. THE GENERAL TREND IS MARKET STAGNATION. INTERNATIONAL TRADE HAS STOPPED GROWING.

PROTECTIONIST POLICY IS ALSO ON THE RISE.

INVESTMENT IN AGRICULTURE IN MANY OF THE PRODUCING COUNTRIES, CERTAINLY IN THE UNITED STATES, HAS SLOWED CONSIDERABLY.

THE STRONG DOLLAR AND HIGH INTEREST RATES HAVE PREVENTED STOCK BUILDING...AND PERHAPS EVEN REDUCED USAGE OF GRAINS.

DEVELOPING COUNTRIES HAVE APPROACHED NEAR BANKRUPTCY.

AND GRAIN EXPORTERS HAVE, FROM TIME TO TIME, IMPLEMENTED STEPS LEADING TOWARDS A PRICE WAR.



THE PROSPECT OF SPEAKING ABOUT TRENDS IN GRAIN MARKETING, THEN, IS GLOOMY INDEED. BECAUSE A TREND, BY ITS VERY DEFINITION, IS A TENDENCY THAT IS CONTINUOUS AND CONSISTENT.

YET, THOSE OF US WHO HAVE BEEN IN THIS BUSINESS HAVE GOOD REASON TO DOUBT THAT WHAT WE ARE EXPERIENCING NOW WILL BE CONTINUOUS.

WE HAVE SEEN TOO MANY CYCLES AND SUDDEN CHANGES TO ACCEPT CONSISTENCY AS AN APPROPRIATE TERM FOR OUR INDUSTRY. THAT WE ARE IN A DIFFICULT PERIOD IS SELF-EVIDENT.

MOST OF US TODAY CAN AGREE AS TO WHAT IS GOING WRONG. WE HAVE MADE TREMENDOUS PROGRESS IN AGREEING TO THE REASONS FOR TRADE GOING AWRY. HIGH INTEREST RATES...HIGH PRICES... POLITICAL INTERFERENCE IN MARKETING, TRADE BARRIERS... WE KNOW ALL ABOUT THESE.

OR WE KNOW ENOUGH TO HAVE STRONG OPINIONS. SURPRISINGLY, WE HAVE COME REMARKABLY CLOSE TO AGREEMENT ON WHAT ARE THE PROBLEMS.

AND NORMALLY, IDENTIFICATION OF THE PROBLEM IS A MAJOR STEP TOWARD A SOLUTION TO THOSE PROBLEMS.



SOLUTIONS, MUST BE FOUND.

OUR WORLD IS TOO FRAGILE TO ALLOW THE NORMAL CYCLE OF LARGE FOOD DEFICITS TO RETURN ONCE MORE AND CATCH US UN-PREPARED.

IMAGINE HOW WELL WE WILL MANAGE UNDER-SUPPLY IN THE FUTURE WITH THE BACKGROUND OF HOW BADLY WE HAVE MANAGED OVER-SUPPLY IN THE PAST.

IT SEEMS TO ME THAT WE SHOULD CONDITION OURSELVES TO WORK TOGETHER. OUR GOAL SHOULD BE REMOVAL OF BARRIERS, NOT SELF-INTEREST...ALTHOUGH CERTAINLY THESE ARE NOT MUTU-ALLY CONTRADICTORY.

TODAY'S DECISIONS IN PART WILL SET TOMORROW'S TRENDS.

I SHOULD POINT OUT THAT SOME AREAS OF CONCERN ARE RECEIVING SIGNIFICANT ATTENTION:



FIRST, THE TREND TOWARD EVEN HIGHER PRICE SUPPORTS IN THE UNITED STATES WILL BE MODIFIED WITH THE 1935 FARM BILL. A MODEST STEP IN THIS DIRECTION WAS TAKEN WHEN CONGRESS PASSED AN AMENDMENT THIS YEAR TO THE 1981 FARM ACT.

PRODUCER GROUPS AND CONGRESS TODAY REALIZE THAT WHEN DOMESTIC PRICES ARE SUPPORTED AT ARTIFICIALLY HIGH LEVELS, THE INTERNATIONAL MARKET PLACE MAY BE AT AN ARTIFICIALLY LOW LEVEL AS EXPORTING COUNTRIES FIND WAYS TO SUBSIDIZE EXCESS SUPPLIES.

THE EUROPEAN COMMUNITY SEEMS ON THE VERGE OF UNDERSTANDING THAT ITS PRICE SUPPORT SYSTEM HAS BECOME FAR TOO EXPENSIVE FOR ITS COMFORT. THIS BATTLE MAY NOT BE OVER, BUT THE OUTCOME IS PREDICTABLE. THE TREND IS IN A NEW DIRECTION.

THE U.S. WILL SOON AGAIN BE SENDING PROPER SIGNALS TO THE MARKET. HISTORY TELLS US THAT, WHEN THAT HAPPENS, THE OTHER PRODUCING COUNTRIES WILL FOLLOW SUIT.

SECOND, THE ISSUE OF CONTRACT SANCTITY AND SUPPLIER DEPENDABILITY HAD BEEN A PAINFUL, BUT PERHAPS USEFUL EXPERIENCE. THE USE OF FOOD EMBARGOES...AT LEAST 4 TIMES BY THE UNITED STATES IN THE LAST DECADE... REACHED ITS EXTREME IN 1980.

THE NEGATIVE REACTION TO THIS EVENT BY ALL BUT A FEW POLITICAL OR ACADEMIC THEORISTS HAS BEEN UNIVERSAL AND EDUCATIONAL,



FOOD EMBARGOES SHOULD NOT THREATEN THE PLANNING OF INTERNATIONAL TRADE. THE CONGRESS OF THE UNITED STATES HAS ELOQUENTLY STATED OUR RESOLVE ON THIS ISSUE.

THIRD, THROUGH BODIES SUCH AS THE FOOD AID CONVENTION, THE PRODUCING COUNTRIES HAVE ACCEPTED A CONCEPT FOR THEMSELVES OF THE OBLIGATION TO PROVIDE FOOD FOR THE HUNGRY OF THE WORLD. THE LEADERS OF THE WEST-INCLUDING PRESIDENT REAGAN AND POPE JOHN PAUL II-ARE FULLY SUPPORTIVE OF FOOD AID AS A CRITICAL ELEMENT FOR PEACEFUL DEVELOPMENT IN THE THIRD WORLD. GROWTH OF THIS TREND WILL BE HELPFUL TO ALL OF US AS WE WATCH INTERCHANGES WITHIN THE INTERNATIONAL GRAIN TRADE.

THE THREE AREAS OF CONCERN I HAVE JUST MENTIONED ARE INDEED IMPORTANT AS WE LOOK AT THE FUTURE, BOTH INTERMEDIATE AND LONG-TERM.

MY ARGUMENT THAT WE HAVE COME CLOSE TO SOLUTIONS ONLY SUGGESTS THAT FEW DIFFER ON THE NECESSITY TO TAKE THE PROPER STEPS.

BUT MY GREATER CONCERN IS THAT, EVEN AFTER RESOLVING THESE ISSUES, WE STILL WILL HAVE AN INDUSTRY THAT LACKS FUNDAMENTAL BASIS FOR GROWTH.

IN FACT, RESOLUTION OF THOSE THREE ISSUES WILL REMOVE OBSTACLES AND WILL CREATE OPPORTUNITIES. BUT, BY THEMSELVES, USEFUL AND VITAL AS THEY ARE, THEY DO NOT CONSTITUTE A DYNAMIC FORCE THAT BUILDS MARKETS.



THE FUNDAMENTAL BASIS FOR GROWTH-AND ULTIMATELY THE WELL BEING OF THE WORLD WE LIVE IN-IS OPEN AND RECIPROCAL TRADE.

IT IS IN THIS AREA THAT GOVERNMENTS AROUND THE WORLD HAVE MUCH WORK TO DO. THEY MUST BE CONVINCED THAT ADDITIONAL STEPS ARE NECESSARY TO REMOVE BARRIERS, TO ELIMINATE QUOTAS AND TO ASSIST INDUSTRY IN THE DEVELOPING COUNTRIES.

CHARITY AND AID PROGRAMS ARE USEFUL UP TO A POINT. THEY CAN NEVER BE A MAJOR FEATURE OF INTERNATIONAL TRADE WITHOUT CREATING RESENTMENT ON THE PART OF THE GIVER AND THE RECEIVER ALIKE.

CREDIT PROGRAMS, WITHOUT A SYSTEMATIC PLAN AND ANALYSIS, ARE AT BEST SUBSIDIES AND AT WORST CREATE FUTURE OBLIGATIONS AND PROBLEMS THAT MAY EVENTUALLY SUFFOCATE INTERNATIONAL RELATIONS.

OPEN AND RECIPROCAL TRADE, BY DEFINITION, MEANS ELIMINATING BARRIERS AND QUOTAS. IT ALSO MEANS CREATING A MARKET PLACE FOR THE BENEFIT OF COUNTRIES WHICH NEED TO EARN FOREIGN EXCHANGE.

IN THE CASE OF DEVELOPING COUNTRIES, IT MEANS ASSISTANCE TO INDUSTRIES IN ORDER TO ENCOURAGE GROWTH AND BUILD INFRASTRUCTURES.



IT MEANS TO SEPARATE ISSUES OF COMMERCE FROM ISSUES OF POLITICS BECAUSE IF WE CAN FIND OUR WAY IN THE WORLD OF COMMERCE, THEN WE NEED NOT BE SO CONFUSED BY THE WORLD OF POLITICS.

A MAJOR IMPEDIMENT TO THE DEVELOPMENT OF TRADE HAS BEEN THE LACK OF FOREIGN EXCHANGE AVAILABLE TO MAKE GROWTH POSSIBLE. DEBT AND INFLATION RISE HAND IN HAND IN THE DEVELOPING COUNTRIES. IF THERE ARE NO FUNDS FOR INVESTMENT, THEN THERE ARE NO MEANS AVAILABLE TO IMPROVE LIVING CONDITIONS.

WITHOUT INVESTMENT AND WITHOUT GROWTH, THERE CAN ONLY BE STAGNATION...A BREEDING GROUND FOR RESENTMENT AND POLITICAL DISTURBANCE.

DEBT AND INFLATION ARE PROBLEMS NOT RESTRICTED TO THE DEVELOPING COUNTRIES.

WE ALL SUFFER FROM THE EFFECTS OF THESE CORROSION ELEMENTS.

MOST ECONOMISTS ASSOCIATE THE HIGH DEBT OF THE UNITED STATES WITH HIGH INTEREST RATES, WHICH IN TURN HAS ESTABLISHED A HIGH DOLLAR IN TERMS OF WORLD CURRENCIES. IT IS SOBERING TO REFLECT ON WHAT HAPPENS WHEN THE WORLD COMES TO UNDERSTAND THAT THE DOLLAR ITSELF HAS LIMITED POTENTIAL AS DEBT INCREASES AND BALANCE OF TRADE FOR THIS COUNTRY WORSENS.



IT IS TIME TO ATTEMPT A PROGRAM THAT MOVES US OUT OF THIS PERIOD OF STAGNATION.

SUCH A PROGRAM MUST GO FAR BEYOND THE OBVIOUS REDUCTION OF TARIFFS AND QUOTA REQUIREMENTS.

IT MUST MOVE FURTHER THAN AID AS AN EXPRESSION OF DECENCY AND CHARITY.

IT MUST OVERCOME THE STIGMA OF SUBSIDY AND PRICE WARS.

AND IT MUST ESTABLISH A PRIORITY FOR INVESTMENTS THAT IMPROVE LIVING STANDARDS GLOBALLY NOW AND PROVIDE EXPANDED MARKETS FOR GOODS AND SERVICES IN THE FUTURE.

HISTORY HAS GIVEN US SOME EXAMPLES OF HOW WE MIGHT DEVELOP SUCH A PROGRAM.

JAPAN'S ECONOMIC RECOVERY AFTER THE END OF THE WAR DUE LARGEMLY TO THE DEDICATION AND INGENUITY OF THE JAPANESE PEOPLE. BUT THE RECOVERY WAS PERHAPS FASTER AND MORE CONVINCING DUE TO MASSIVE INTERNATIONAL ASSISTANCE PROGRAMS AND THE FREEDOM TO EXPORT ITS MANUFACTURED GOODS TO THE WEST.



EUROPE'S ECONOMIC RECOVERY CAME ONLY AFTER THE DETERMINATION TO CREATE A MEANINGFUL ALLIANCE, TOGETHER WITH A SYSTEMATIC PROGRAM TO UTILIZE INVESTMENT FUNDS GENERATED BY THE MARSHALL PLAN.

THE UNITED STATES FOOD FOR PEACE PROGRAM DISTRIBUTED FOOD TO STARVING PEOPLE WHEN IT WAS BADLY NEEDED.

MORE IMPORTANT, IT CREATED FUNDS AND EXPERTISE IN MANY PLACES, BRINGING STABILITY AND A MEASURE OF SELF-SUFFICIENCY THAT REPLACED RIOTING AND RATIONING.

ARE WE IN THE INTERNATIONAL GRAIN TRADE... GOVERNMENTS, PRIVATE COMPANIES, TRADE GROUPS... READY TO AWAKEN FROM THE TRANCE OF SENSELESS PRICE BATTLES AND PERHAPS TAKE SOME STEPS TO AN APPROACH THAT BY THE YEAR 2000 COULD BE A REALITY, NOT A DREAM?

IT SEEMS WE ARE IN DESPARATE NEED FOR AN APPROACH TO THE FUTURE THAT ENCOMPASSES NOT ONLY THE APPARENT ALTRUISM OF THESE PREVIOUS PROGRAMS, BUT, IN ADDITION, AN APPROACH THAT HAS THE VISION TO ESTABLISH LASTING OBJECTIVES.

I SUBMIT TO YOU THAT INVESTMENT IN THE INFRASTRUCTURE OF DEVELOPING COUNTRIES WILL PAY DIVIDENDS IN THE FUTURE. THESE DIVIDENDS WILL BE AT LEAST AS GREAT AS WE HAVE EXPERIENCED FROM THE INVESTMENT OF PREVIOUS ASSISTANCE TO JAPAN AND EUROPE AND THE STARVING POPULATION CENTERS OF THE WORLD. IN THE FORM OF GROWING MARKETS, THE DIVIDENDS WILL ENRICH THE INVESTOR WHILE AT THE SAME TIME BEGIN A MEANINGFUL TREND OF HOPE.



THESE INVESTMENTS SHOULD BE DESIGNED TO IMPROVE THE LIVING CONDITIONS FOR THE RECIPIENTS, BUT MORE IMPORTANT, THEY SHOULD ALLOW THE RECIPIENTS TO BUILD INDUSTRY, TO PROSPER AND TO EXPORT.

WE SHOULD THINK OF A WORLD THAT MIGHT HAVE A CHOICE OF INTELLIGENT CONSUMPTION OF SOPHISTICATED CONVENiences AND A WORLD THAT ENJOYS THE FREEDOM TO PAY FOR THAT CHOICE, NOT WITH DEBT AND RESENTMENT AND POLITICAL SUBSERVIENCE, BUT WITH GOODS AND SERVICES THAT CAN BE EXCHANGED IN A TOTALLY FREE ENVIRONMENT.

I HAVE BEEN TOLD THAT EVEN TO THINK ABOUT SUCH A PROGRAM IS NAIVE. THIS IS PARTICULARLY THE CASE WHEN THE USE OF GRAIN IS MENTIONED AS A MEANS FOR INVESTMENT.

AFTER ALL, ANYTHING THAT SOUNDS LIKE ECONOMIC ASSISTANCE BECOMES AN ITEM FOR THE CONGRESS OF WHATEVER GOVERNMENT TO MANAGE. AND WITH THE INVOLVEMENT OF GOVERNMENT COME THE SPECIAL INTEREST GROUPS, SHIPPING INDUSTRIES, UNION LEADERS, PROTECTIONISTS, POLITICAL CONSERVATIVES AND OTHERS.

THE LABELS AND THE CHARACTERISTICS OF THOSE WHO WOULD ARGUE AGAINST THE POSSIBILITY OF SUCH A PROGRAM ARE FAMILIAR IN EVERY COUNTRY OF THE WORLD. THEIR NEGATIVISM, WHICH AT TIMES SOUNDS LIKE GOOD COMMON SENSE, IS GENERALLY WITHOUT ANY HOPE AND WITHOUT IMAGINATION.



WE SHOULD KNOW BY NOW THAT THE AMOUNT OF PURE AID AVAILABLE FOR DEVELOPING COUNTRIES WILL NEVER BE ADEQUATE.

WE SHOULD KNOW THAT THE SOLUTION TO DEBT PROBLEMS CANNOT BE BURDENSOME CREDIT.

AND WE SHOULD KNOW THAT NEW REAL DEMANDS IN INTERNATIONAL TRADE OF GRAIN CAN ARRIVE ONLY AFTER THERE IS MEANS FOR BUYERS TO PAY.

A PROGRAM THAT WE MIGHT DARE TO THINK ABOUT COULD BE DEVELOPED WITH THE FOLLOWING FEATURES:

1. COUNTRIES IN NEED OF FUNDS FOR INFRASTRUCTURE AND INDUSTRY TO BE CANDIDATES TO RECEIVE GRAIN SHIPMENTS IN THE FORM OF OUTRIGHT GRANTS.
2. THE GRANTS TO BE MADE ONLY AFTER RECIPIENT COUNTRIES HAVE COMPLETED THEIR NORMAL COMMERCIAL PURCHASES.
3. THE GRANTS NOT TO BE SUBSIDIES TO PROMOTE SHORT-TERM EXPORTS FROM ONE PRODUCER OR ANOTHER. RATHER THE GRANTS TO BE SHARED INVESTMENTS ON THE PART OF ALL PRODUCING COUNTRIES,
4. THE PROGRAM TO BE SPACED OVER SEVERAL YEARS SO AS TO ALLOW LONG-TERM PLANNING.



5. THE LOCAL CURRENCY THEREBY MADE AVAILABLE AS A RESULT OF THE GRANTS TO BE UTILIZED FOR SPECIFIC INVESTMENT PROJECTS.
6. THE GRANTS TO BE TOTALLY FREE FROM ATTACHMENT TO PERIPHERAL INDUSTRIES OR POLITICAL PRESSURES IN THE GRANTOR COUNTRIES.

THE EXPORTING COUNTRIES HAVE IN THE PAST JOINED TOGETHER TO ATTEMPT TO CONTROL DISTRIBUTION AND PRICE RANGES. HOW MUCH MORE MEANINGFUL IT WOULD BE IF THOSE EXPORTERS COULD JOIN HANDS IN AN INVESTMENT STRATEGY THAT OFFERED FUTURE REWARDS FOR ALL.

AS THE INVESTMENTS IN THE DEVELOPING COUNTRIES SUCCEED, AND EVEN BEFORE SO AS TO ESTABLISH THE TREND AT THE EARLIEST MOMENT, TARIFFS AND QUOTAS NEED TO BE REFORMED. SUCH REFORMS WILL ALLOW MAXIMUM EXPORTS FROM THOSE COUNTRIES WHO WILL ULTIMATELY INCREASE THEIR GRAIN IMPORTS AS THEY GAIN NEW PURCHASING POWER.



LADIES AND GENTLEMEN, THE TREND FOR GRAIN MARKETS WILL BE ESTABLISHED NOT ONLY BY THE NORMAL VAGARIES OF WEATHER AND POPULATION GROWTH AND NEW TECHNOLOGY,

THEY WILL BECOME ESTABLISHED PARTLY BY THE SPEED WITH WHICH WE COME TO SOLUTIONS OF RECOGNIZED PROBLEMS,

AND THEY WILL BE ESTABLISHED WHEN WE USE OUR COLLECTIVE ABILITIES AND IMAGINATIONS NOT TO DEVELOP NEW WAYS TO CONTEST EACH OTHER'S RIGHT TO SURVIVE, BUT RATHER TO DEVELOP EACH OTHER'S NATURAL AND FUNDAMENTAL INSTINCT TO PROSPER.

END



# THE CENTENNIAL FORUM LE FORUM DU CENTENAIRE

## WORLD GRAIN TRADE BEYOND 2000

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One must be both a little bit brave and quite a bit foolhardy to agree to discuss the conditions of world grain trade at the beginning of the next century. Nevertheless I have agreed to give it a try. Let me say that while I am taking my assignment seriously and will do the best that I am capable of, I hope that you will have the good sense to take what I say with the proverbial grain of salt. When one considers that numerous long run projections, such as those made by the Club of Rome or can be found in the Global 2000 Report, have been falsified very quickly, we must recognize that I am engaged in a risky undertaking. But we do need to do the best that we can in trying to look ahead and that is what I will do--do the best that I can and you will need to judge how good my best may be.

I shall consider a number of aspects of prospective developments in world trade in grain. First, a look will be taken at probable trends in prices and in the volume of trade in grain if current domestic and international trade policies remain more or less unchanged. Second, I shall review some of the recent studies of what would happen to prices in international markets if there were significant liberalization of trade in

Prepared for presentation at The Centennial Forum, A symposium to celebrate the 100th Session of the International Wheat Council, June 28-29, 1984 in Ottawa, Canada.

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



wheat and other grains. Finally, I will consider how international trade in grain is likely to be organized at the turn of the century.

I hardly need to tell this audience that the production, distribution, trade and consumption of wheat and other grains, especially rice, are subject to an enormous variety of governmental interventions, manipulations, subsidies, taxes, price controls, price supports and governmental procurement. In some countries governments devote a great deal of their citizens' resources to make wheat and rice more expensive; in other countries governments go to considerable length to lower the prices of wheat and rice. In spite of these inconsistent and uncoordinated efforts, real or deflated grain prices where reasonably free to equate demand and supply have gradually declined during most of the twentieth century. Not only have grain prices followed a declining trend, but grain is now being produced in many countries at very reasonable--one might say low--cost. There are very few products of common use that cost less per kilogram than grain. Did you ever stop to think that wheat and maize sell for less than a carbonated beverage, kilogram for kilogram? Less than steel? Less than the nutrients in nitrogen fertilizer?

The increase in the amount of wheat that can be purchased with an hour of work since the beginning of this century can only be described as extraordinary. In the first decade of this century the average wage of a manufacturing worker in the United States was such that it took approximately five hours of work to equal the farm price of a bushel of wheat (approximately 18 hours for 100 kilograms) (Simon, p. 75); in 1984 one hour of work equals approximately three bushels of wheat (about 75 minutes for 100 kilograms). In three quarters of a century, the purchasing power of work in terms of the farm price of wheat increased almost 15 times. It might be



argued that this great change occurred because real wages increased so much, but one response to this argument is that this much more valuable labor was also used in the production of wheat as well as other grains.

#### Grain Price Trends--Past and Prospective

Earlier I noted that the long run trend of grain prices, adjusted for changes in the price level, had been declining during the twentieth century. Actually, based on U.S. farm prices of grains, the declines started as early as 1870 for wheat, barley and rice (see Figures 1, 2 and 3). For corn the decline did not start until the early part of this century. The graphs of deflated prices show the declines quite clearly.

Table 1 presents the real export prices for wheat and corn for the United States for selected years from 1910 to 1959 and then annually since. As will be seen, the real prices for recent years are below these during the years of the Great Depression for both wheat and corn. The 1982 export price of corn was at a low of \$39 in 1967 prices; this was probably the lowest price in the twentieth century.

The World Bank has presented annual data on export prices for various grains for 1950 to date (1984). The World Bank has used a different deflator, namely the index of c.i.f. unit values of manufactured products of the developed countries imported by developing countries. Since 1960 the c.i.f. index has risen somewhat more than the U.S. wholesale price index; consequently the real prices of the major grains have declined more since 1960 according to the World Bank estimates than those given in Table 1. The other difference between the World Bank estimates and those in Table 1 is that the World Bank has used the prices of given grades rather than average export unit values. But the results reveal a very similar picture. Between



4

WHEAT PRICES  
RECEIVED BY FARMERS  
DEFLATED BY 1967=100 W.P.I.

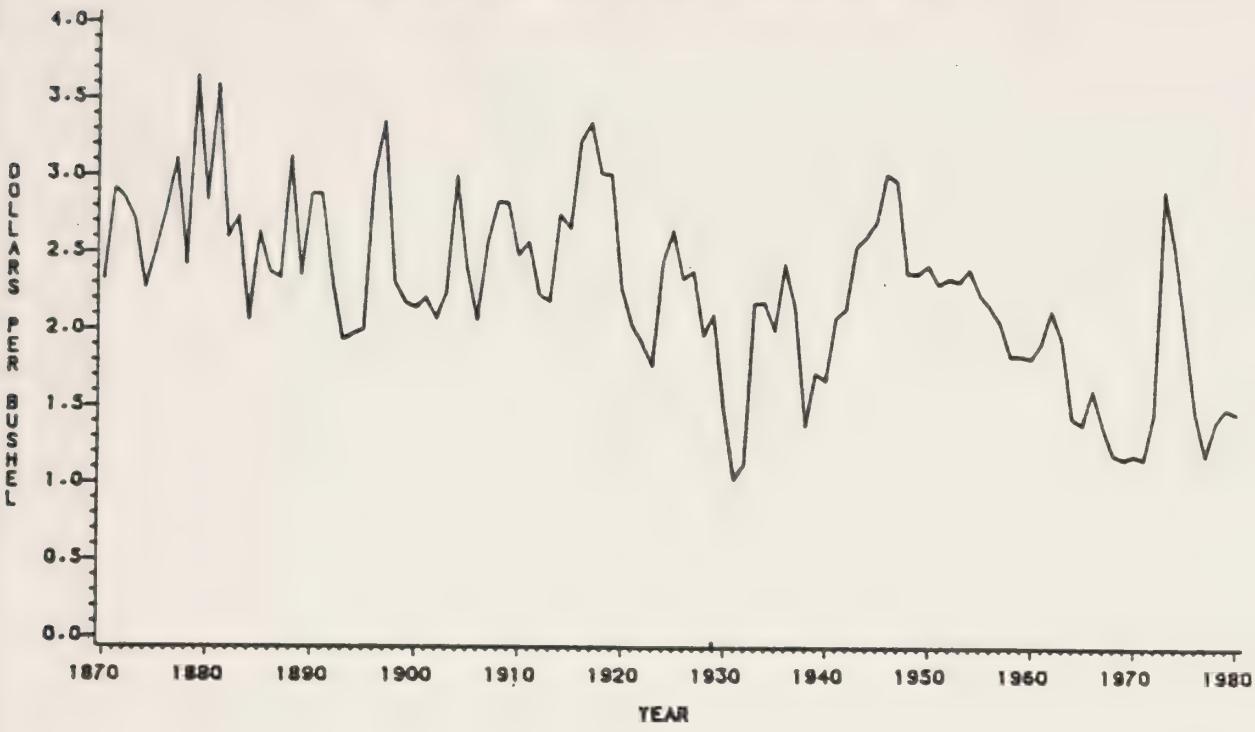


FIGURE 1

RICE PRICES  
RECEIVED BY FARMERS  
DEFLATED BY 1967=100 W.P.I.



FIGURE 2



BARLEY PRICES  
RECEIVED BY FARMERS  
DEFLATED BY 1967=100 W.P.I.

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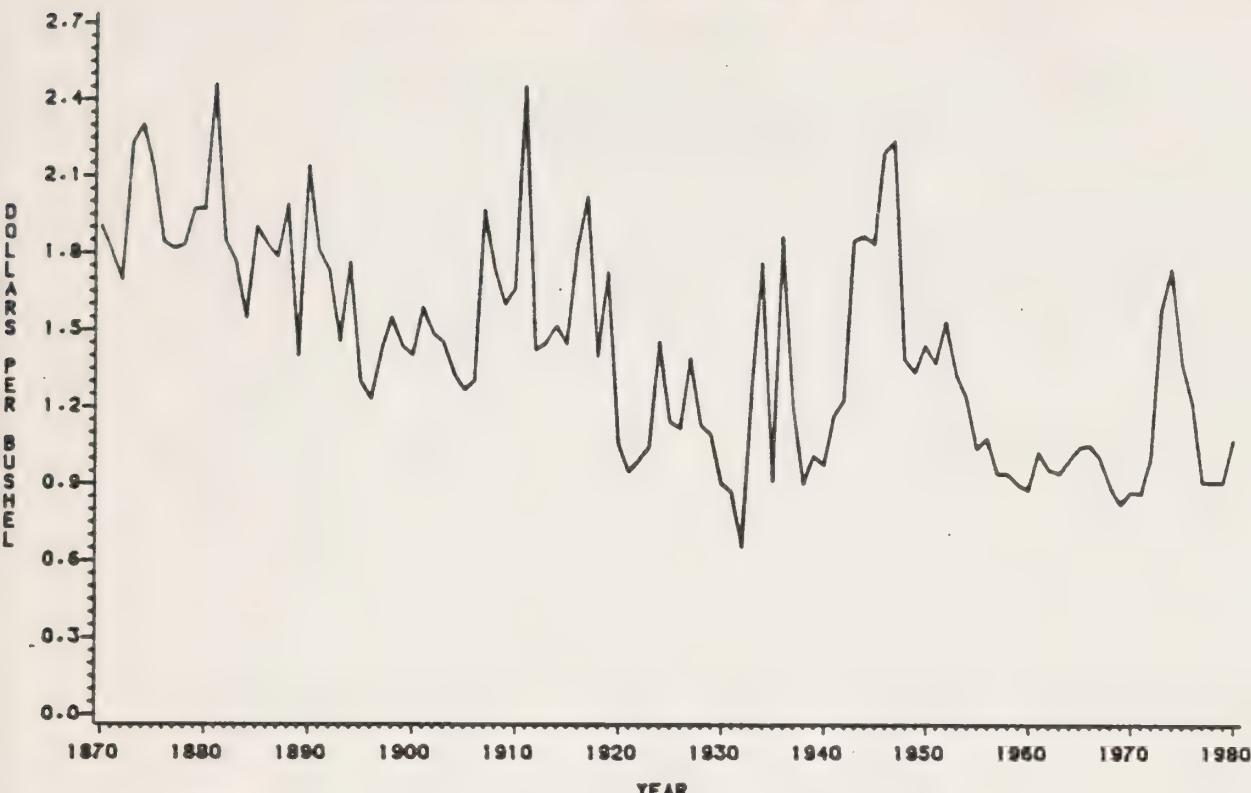


FIGURE 3

CORN PRICES  
RECEIVED BY FARMERS  
DEFLATED BY 1967=100 W.P.I.





TABLE 1

REAL EXPORT PRICES FOR WHEAT AND CORN, UNITED STATES,  
SELECTED YEARS, 1910-1983<sup>a</sup>

(1967 \$ per ton)

| Calendar Year | Wheat | Corn | Calendar Year | Wheat | Corn |
|---------------|-------|------|---------------|-------|------|
| 1910-1914     | 100   | 74   | 1969          | 57    | 48   |
| 1925-1929     | 103   | 76   | 1970          | 53    | 52   |
| 1930-1934     | 66    | 68   | 1971          | 54    | 50   |
| 1935-1939     | 79    | 85   | 1972          | 54    | 46   |
| 1945-1949     | 122   | 94   | 1973          | 80    | 63   |
| 1950-1954     | 95    | 80   | 1974          | 110   | 79   |
| 1955-1959     | 69    | 61   | 1975          | 95    | 76   |
| 1960          | 65    | 53   | 1976          | 80    | 64   |
| 1961          | 69    | 52   | 1977          | 58    | 52   |
| 1962          | 70    | 52   | 1978          | 61    | 50   |
| 1963          | 69    | 56   | 1979          | 67    | 50   |
| 1964          | 69    | 57   | 1980          | 66    | 50   |
| 1965          | 62    | 57   | 1981          | 62    | 50   |
| 1966          | 62    | 56   | 1982          | 56    | 39   |
| 1967          | 64    | 54   | 1983          | 54    | 45   |
| 1968          | 60    | 48   |               |       |      |

<sup>a</sup>The export prices are export unit values; the price deflator is the U.S. wholesale price index. Source: U.S. Department of Commerce, Statistical Abstract of the United States, various issues.



1950-54 and 1978-82 the real price of U.S. corn in Table 1 declined by 40 percent while the World Bank measure of the real price of Argentine corn fell by 50 percent and U.S. export price by slightly more (52.5 percent). For wheat the comparisons are similar--the measure I used declined by 34 percent while the World Bank measure of the real export price of Canadian wheat declined by 40 percent and the U.S. real export price by 43 percent. The data in Table 1 do not exaggerate the decline in real grain prices over the past three decades.

The frequent emphasis upon the instability of grain prices during the 1970s and early 1980s, so strikingly shown in the graphs and tables, often diverts attention from the remarkable growth in world trade in grain that occurred without a significant increase in the real prices of grain. Between 1969-71 and 1980-82 world exports of grain more than doubled. For the same period of time, world trade in all agricultural products increased by about 60 percent. The capacity of grain producers to accommodate such a large increase in exports was an important contribution to world food availability and security.

But as one looks at the remainder of this century, there seems little basis for anticipating a growth in world grain trade at the same rate as was true of the 1970s. In fact, a more reasonable expectation is that annual growth for the remainder of the century would be less than half of the 7.5 percent realized from 1969-71 to 1980-82. Long-term Grain Outlook (1984) by the Secretariat of the International Wheat Council presents a series of informed judgments concerning prospective developments in the demand and supply of grains in five different economic groupings. While eschewing the concept of projections, their analysis of each group's likely production and consumption indicates that there is a significant



likelihood that between 1980 and 2000 world grain trade would increase by about 27 percent or an annual growth rate of but 1.2 percent. Hopefully, this is a very pessimistic expectation. The U.S. Department of Agriculture (1982) has presented a more optimistic view, namely that during the 1980s world grain trade might increase at an annual rate of 2.7 percent. This guesstimate is consistent with my analysis that a growth rate of 3.0 percent is a realistic expectation. Even if this rate were exceeded by half, the result would be a much slower growth than occurred during the 1970s.

If one analyzes the sources of growth in grain imports during the 1970s, it becomes obvious that such a high rate of growth cannot be sustained into the future (Table 2). The Centrally Planned Economies accounted for almost half of the world import growth of 125 million tons between 1969-71 and 1980-82. Their grain imports grew at the remarkable annual rate of 25 percent. The next most important source of growth was the middle income developing countries. The low income developing countries had almost no net increase in grain imports during the period; it was this group of countries that, as of the early and mid-1970s, many expected would become a drain on world food supplies that would be so large as to require drastic steps, such as limiting their right of access to world grain supplies. The Capital Surplus Oil Exporters had a very high growth rate, but these countries have such a small population that further substantial growth cannot be expected.

The high growth rates of grain imports by the Centrally Planned Economies resulted from several factors. These included the relatively poor performance of Soviet agriculture after 1975 (Johnson and Brooks 1983), the rapid growth of meat production and consumption in Eastern Europe during



TABLE 2.--International Trade in Cereals by Economic Groups, 1960-62, 1969-71, 1977-79 and 1980-82 (million metric tons)

| Country Group                 | 1960-62 |        |      | 1969-71 |        |       | 1977-79 |        |       | 1980-82 |        |       |
|-------------------------------|---------|--------|------|---------|--------|-------|---------|--------|-------|---------|--------|-------|
|                               | Export  | Import | Net  | Export  | Import | Net   | Export  | Import | Net   | Export  | Import | Net   |
| Industrial Countries          | 53.8    | 37.1   | 16.7 | 77.6    | 52.1   | 25.5  | 148.4   | 63.1   | 85.3  | 191.9   | 73.4   | 118.5 |
| United States                 | 31.4    | 0.6    | 30.8 | 36.3    | 0.4    | 35.9  | 90.9    | 0.2    | 90.7  | 109.0   | 0.3    | 108.7 |
| Canada                        | 10.2    | 0.7    | 9.5  | 13.7    | 0.5    | 13.2  | 18.5    | 0.7    | 17.8  | 23.8    | 1.2    | 22.6  |
| Australia                     | 5.9     | --     | 5.9  | 8.8     | --     | 8.8   | 11.7    | --     | 11.7  | 15.8    | 0.1    | 15.7  |
| France                        | 3.4     | 1.0    | 2.4  | 11.4    | 1.0    | 10.4  | 14.3    | 1.9    | 12.4  | 20.4    | 1.9    | 18.5  |
| Japan                         | 0.1     | 5.0    | -4.9 | 0.7     | 14.7   | -14.0 | 0.3     | 23.3   | -23.0 | 0.8     | 24.4   | -23.4 |
| Centrally Planned             | 9.8     | 12.4   | -2.6 | 12.4    | 17.5   | -5.2  | 9.3     | 50.0   | -40.7 | 7.7     | 73.1   | -65.4 |
| USSR                          | 7.6     | 0.6    | 7.0  | 8.2     | 2.7    | 5.5   | 3.7     | 20.7   | -17.0 | 2.4     | 39.3   | -36.9 |
| Eastern Europe                | 1.3     | 8.3    | -7.0 | 2.2     | 9.7    | -7.5  | 4.1     | 16.6   | -12.5 | 4.0     | 13.5   | -9.5  |
| China                         | 0.9     | 3.5    | -2.6 | 2.0     | 5.2    | -3.2  | 1.5     | 12.7   | -11.2 | 1.0     | 18.6   | -17.6 |
| Low Income Countries          | 2.4     | 7.3    | -4.9 | 2.1     | 10.9   | -8.8  | 2.8     | 11.7   | -8.9  | 3.0     | 13.5   | -10.5 |
| India                         | --      | 4.1    | -4.1 | --      | 3.6    | -3.6  | 0.8     | 0.6    | 0.2   | 0.8     | 1.0    | -0.7  |
| Indonesia                     | --      | 1.2    | -1.2 | 0.2     | 1.3    | -1.1  | --      | 2.8    | -2.8  | --      | 2.5    | -2.4  |
| Middle Income Countries       | 9.6     | 10.9   | -1.3 | 17.6    | 24.2   | -6.6  | 26.1    | 49.2   | -23.1 | 23.8    | 57.3   | -33.5 |
| Korea                         | --      | 0.5    | -0.5 | --      | 2.6    | 2.6   | --      | 4.1    | -4.1  | --      | 6.1    | -6.1  |
| Argentina                     | 5.6     | --     | 5.6  | 3.5     | 0.1    | 3.4   | 14.6    | --     | 14.6  | 14.3    | --     | 14.3  |
| Brazil                        | 0.1     | 2.1    | -2.0 | 1.2     | 2.1    | 0.9   | 0.7     | 4.8    | -4.1  | --      | 5.6    | -5.6  |
| Mexico                        | 0.2     | 0.1    | +0.1 | 0.5     | 0.4    | 0.1   | 0.1     | 4.0    | -3.9  | --      | 5.5    | -5.5  |
| South Africa                  | 1.3     | 0.2    | 1.1  | 0.3     | 1.2    | 0.9   | 2.6     | 0.2    | 2.4   | 4.1     | 0.3    | 3.8   |
| Thailand                      | 1.9     | --     | 1.9  | 2.9     | 0.1    | 2.8   | 4.4     | 0.1    | 4.3   | 6.0     | 0.2    | 5.8   |
| Capital Surplus Oil Exporters | --      | 0.7    | -0.7 | 0.1     | 2.0    | -1.9  | 0.1     | 6.8    | -6.7  | 0.1     | 11.6   | -11.5 |
| Total                         | 75.6    | 68.4   | --   | 109.8   | 103.9  | --    | 186.9   | 183.3  | --    | 226.5   | 228.9  | --    |

Source: FAO, FAO Trade Yearbook, various issues.

the 1970s (Johnson 1981), decisions taken in the People's Republic of China to improve the living standards of its citizens (Johnson 1982), and adherence to the policy of consumer prices of food constant in nominal terms. Fixed nominal prices of food in the face of inflation and rising money wages result in demand growing faster than supply unless extraordinary measures are taken to increase supplies. One of the measures used to increase meat and milk supplies was to sharply increase net imports of grain and feeding materials.

The fixed nominal prices of food has been made possible by the payment of large and increasing subsidies to make up the difference between the prices paid by consumers and the prices paid to producers. In order to increase domestic production, producer prices have had to be raised. These policies remain in most of the Centrally Planned Economies. In Poland the subsidies have been largely eliminated and in Hungary substantially reduced but still an important demand factor. Large subsidies continue in other Eastern European economies.

Very large food subsidies exist in the Soviet Union--in 1983 such subsidies probably equaled 50 billion rubles and exceeded the value of retail sales of meat, milk and potatoes--the primary products that are subsidized. The price policy that has resulted in such large subsidies, namely keeping the nominal prices of the major food products constant, has been one important factor in the large scale grain imports by the Soviet Union. The unwillingness of the Soviet government to use prices to equate supply and demand for meat and milk has resulted in large unmet demands for these products, which has put pressure upon policy makers to import large quantities of grain and other feeding materials. Recent quite modest crops of grain have also been a factor, but even if grain crops increase imports will still

be important factors in world grain markets for years to come (Johnson and Brooks 1983).

However, there is almost no prospect that the strong growth in grain import demand during the 1970s resulting from policies and performance of agricultures in Eastern Europe and the Soviet Union will be repeated during the next decade. Eastern Europe would be unlikely to once again go into debt to buy feed, even if there were institutions willing to lend for that purpose. Unless governments of grain exporting countries are willing to guarantee such loans, it is unlikely that financial institutions would make loans with as little concern about the use of the funds as they did during the 1970s. Thus it is my view that at best the level of grain imports by Eastern European economies and the Soviet Union of the past few years will be maintained. In fact, the most probable outcome will be for some decline.

China is one of the world's largest grain importers at approximately 18 million tons annually. While it would not be wholly unexpected for this to increase to 22 to 25 million tons within the next decade, it is also possible that grain imports could decline to 10 million tons. The recent radical rural policy changes that have, in effect, abolished the commune as both an economic and political unit and reinstated a fairly liberal form of the family farm with collective ownership of the land have resulted in significant output increases. Numerous policy changes in addition to the one noted have also resulted in large income increases in rural areas. Thus demand as well as output has increased in the farm areas. Meat production has been increasing at a rapid rate. Further, China also has a system of food price subsidies for grains and vegetable oils for the urban population. Chinese population growth is slowing down and is likely to continue a downward



growth trend for the rest of this century. But income growth and the greater freedom of the people to spend their income as they see fit is likely to keep demand for grain and other foods growing apace with production. I conclude that it is not unreasonable to assume that the most likely prospect is for little or no change in grain imports.

While the middle income developing countries will have a relatively high annual growth of grain use and thus their exports will continue to increase, perhaps at nearly the same rate as during the 1970s. But this is almost the only bright spot in world grain demand growth. Feed use of grain in the industrial countries will increase slowly, perhaps only slightly more than 1.0 percent annually, and food use will increase hardly at all. Per capita incomes are now so high in the developed countries that per capita meat consumption may have come close to reaching a maximum in several developed countries. Food use of grain may well fail to keep pace with population growth and population growth will be slow indeed at well under 1 percent.

Consequently there is no basis to assume that the long term slow downward trend in real grain prices will be interrupted in the next decade or so. In fact, there is a strong probability that unless there is a substantial reduction in the resources devoted to grain production in the major exporting countries that real grain prices will decline at an accelerated rate.

#### Organization of World Trade in Grains

World trade in grains is subject to numerous pervasive interventions by governments. Some of these interventions are the consequence of specific domestic price support and supply management efforts. Others have a more explicit ideological base, namely the use of state trading either when there is little or no private domestic trading or when there is private domestic



trading but private individuals are prohibited from engaging in international trade.

How far trade in grains is influenced by governmental interventions is illustrated by data presented recently by Ray Goldberg of the Harvard Business School. Table 3 presents classifications of the role of state trading and other types of quantitative interventions in the importing of wheat and corn. According to his data as of 1980 nearly 97 percent of wheat imports were subject to state trading, variable levies or licenses. For corn about 75 percent of all imports are by state traders or subject to variable levies.

I have not seen a systematic analysis of the role of state trading or variable export subsidies in the export of grain. Grain exports are probably affected by about as many governmental interventions as imports--

TABLE 3  
CLASSIFICATIONS OF IMPORT CONTROLS

|                         | 1960 | 1965 | 1970 | 1975 | 1980 |
|-------------------------|------|------|------|------|------|
| Wheat Imports (percent) |      |      |      |      |      |
| State Trading           | 62.6 | 77.9 | 65.4 | 75.1 | 80.9 |
| Variable Levies         | 34.5 | 19.4 | 29.4 | 20.6 | 13.6 |
| Licenses                | 0    | 0    | 0    | 0    | 2.3  |
| Private Trade           | 2.9  | 2.7  | 5.2  | 4.3  | 3.2  |
| Corn Imports (percent)  |      |      |      |      |      |
| State Trading           | 7.5  | 6.6  | 12.0 | 40.6 | 47.7 |
| Variable Levies         | 76.6 | 80.0 | 65.9 | 40.1 | 27.3 |
| Private Trade           | 15.9 | 13.4 | 22.1 | 19.2 | 25.0 |

Source: Ray A. Goldberg, "The Role of Private and Cooperative Sectors in Global Agribusiness," Global Agribusiness Seminar, Cambridge, Mass., April 8-11, 1984, p. 50. Based on data provided by U.S. Department of Agriculture.



wheat marketing boards such as the ones in Canada and Australia; Brazil and Argentina intervene in grain export markets either quite directly or through multiple exchange rates or export duties; the European Community uses variable export subsidies to achieve the desired level of grain exports; the United States (as well as many other countries) uses food aid and subsidized credit to expand exports. In addition, in the United States price support loans affect exports and target prices may act as an implicit export subsidy when output restraint is ineffective. Any differences in the extent and effects of governmental interventions and on grain exports compared to imports depends upon the evaluation of the influences that flow from the policies of the United States. If these policies are believed not to have a significant long run effect upon the volume of U.S. grain exports, then grain exports are less influenced by governmental interventions than grain imports. But if a somewhat different position is taken, namely that U.S. farm programs have had the effect of increasing the production of grains, then there is little difference in the role of interventions between imports and exports.

#### Governmental Interventions in the Grain Trade in the Future

For a person who believes that the market is one of the most important institutions ever devised by man, I see little in recent history that indicates that the role of the market will be enlarged for the grains in the next two or three decades. As noted, wheat imports are almost all controlled by governments, either by direct state trading or by the use of mechanisms such as variable levies that permit the domestic market to be wholly insulated from world market conditions. The same data indicate that the role of state trading has increased significantly for corn imports, presumably due to the



much greater relative importance of the Centrally Planned Economies in world corn trade after 1970. And most grain exports are subject to various forms of intervention.

Why is there such a high degree of direct governmental intervention in the trade in grain? For the Centrally Planned Economies, such as USSR and the People's Republic of China, the answer seems quite simple--in these economies the market plays but a limited role for most products. Certainly market prices are given very little emphasis in determining production and often market prices are not the main device used to ration available supplies among consumers. But in the market economies of Western Europe, America and Asia, trade in agricultural products is subject to a high degree of management by governments. This is true though most production decisions in these economies are made in response to price signals (though often prices do not represent ones that equilibrate demand and supply) and an even larger percentage of consumption decisions are price responsive. Yet in agriculture there is much intervention in prices. Governments have long since learned that you can intervene in domestic farm prices only if you intervene in exports and imports, unless you have very, very deep pockets. Domestic price interventions require that governments be willing to become residual suppliers and to accept the responsibility for supply management for the world, through stock accumulations or output controls, or accept an active role in managing trade so that supply equals demand in the domestic market at the established price. With a few notable exceptions, most governments appear to have followed the second path rather than the first. Only the United States and Canada appear to have been willing to accept the first role on a more or less permanent basis and Canada's attachment to it is rather tenuous, at best. And in terms of her own interest, quite properly as long



as the United States behaves as it has in recent years.

Two reasons are often given for governments intervening in the domestic markets for grains and managing international trade in order to maintain reasonably stable internal prices for producers and consumers. One is that international market prices are significantly distorted by the interventions of many governments. It is generally argued that international market prices are now below what they would be under free or liberal trade. Yet the policy makers who use this argument have made little or no effort to undertake the studies that would be required to indicate the magnitude of the distortion.

The other reason is that international market prices are highly variable and undependable. An authoritative source makes the following claim (Commission of the European Communities 1981):

Comparisons with world market prices may easily lead to misleading conclusions. It is highly unlikely that European consumers could be supplied for long at low and stable world prices if Community supply, because of reduction in production, would depend to a greater extent on imports. World market prices are notoriously volatile because the quantities involved in international markets are often marginal in relation to total production (e.g., sugar, cereals, dairy products), and may reflect short-term fluctuations in production. For several products (e.g., beef, wine, tobacco) there is no real market and prices vary according to the destination of exports.

Therefore the Commission is convinced that a generalized and systematic alignment to world market prices would not be a practical policy guideline.

The issue here is not primarily the degree or extent of protection, but rather whether a given political entity should prevent the variations in international market prices from penetrating its borders. The statement alleges that the European Community would have to pay significantly higher prices if its import demand increased, though the basis for this conclusion is nowhere indicated.



What do we know about the probable increase in world market prices if there were substantial liberalization of agricultural trade? And what do we know about the volatility or variability of international market prices under liberalized trade compared to the interventions that now exist in the world? There have been a number of studies that have analyzed the effects of national agricultural and trade policies upon the level and variability of international market prices for the grains.

In my book, World Agriculture in Disarray (1973), I attempted in a somewhat judgmental way to estimate how much the national market interventions had distorted the prices of grains during the late 1960s and early 1970s. It was my conclusion that the international market prices of wheat had been reduced by approximately 10 percent--I put it, not more than 10 percent. The price of feed grains had been reduced by about the same percentage and that due to supply interrelationships the price of soybeans had been depressed by about 10 percent. I argued that while there were national policies that increased the output of grains and reduced their utilization through high prices, there were other national policies that reduced the output of grain. In particular, there were at the time output reduction programs in North America and Australia and the low price policies followed in Argentina.

In recent years there have been a number of efforts to measure these same price effects. Since I believe that future policies affecting international trade in grain will be affected, at least to some small degree, by our understanding of the consequences of existing policy, I ask your indulgence as I present a review of several such studies.

Valdes and Zietz (1980) estimated the effects of a 50 percent reduction in both tariff and nontariff barriers by the OECD countries upon inter-



national market prices and upon the volume and value of exports by developing countries. The time period for the estimates was 1975-77, when the international prices of grains were relatively high. But for this time period, it was estimated that price increases that would result from a 50 percent reduction in trade barriers on farm products for OECD countries would have been less than 5 percent for maize, wheat, milled rice and soybeans.

Ulrich Koester (1982), using the model and data bases developed by Valdes and Zietz, estimated the effect of removing the grain protection by the European Community upon the level of international market prices for grain. The projected increases in world grain market prices ranged from less than 1 percent for millet and sorghum to almost 20 percent for oats. For wheat the projected increase was 9.6 percent and for maize, 2.2 percent. The price increase for barley was projected at 14.3 percent. If the grains are weighted by the value of world exports in 1975-77, the average increase in price would have been 6.7 percent.

Maurice Schiff (1983) estimated a model of the world wheat market, based on econometric estimates of his own. Free trade was assumed for the European Community, the United States, Canada, Australia, Japan, and Argentina. The model included estimates of the wheat trade functions of the USSR and the rest of the world for continuation of existing policies. He estimates that if there had been free trade in wheat in the designated countries from 1964 to 1978 that the average increase in world wheat price would have been 15 percent. He also estimates that if there had been free trade in the European Community only, with all other countries continuing their actual policies, the world market price of wheat for the same period would have been 17 percent higher. This result may seem somewhat surprising



until it is remembered that during most of the years included in the analysis the major exporters, especially the United States and Canada, had limited the output of wheat by domestic supply management programs. If there had been universal free trade, exports of wheat by the major exporters would have been somewhat higher than they actually were.

The most systematic studies of the effects of trade liberalization for agricultural commodities have been undertaken by Rodney Tyers and his associates at the Australian National University. In one study, free trade was assumed for the large OECD countries and a number of important market developing countries--the ASEAN members (Indonesia, Malaysia, Thailand, Singapore, Philippines) plus India, Republic of Korea, Pakistan, Bangladesh, and Sri Lanka. Trade liberalization was not assumed for the Centrally Planned Economies, Western Europe outside the European Community, nor for any developing country other than those named. International market prices were projected for three periods of time--3, 8 and 13 years, representing the short, intermediate and long run. Estimates were made for rice, wheat and coarse grains (principally maize). International market prices were projected for each of the three time periods (1980, 1985 and 1990) for (a) continuation of the agricultural and trade policies of the late 1970s and (b) free trade in the countries and regions indicated. Estimates (see Table 4) were made of international market prices in 1970 US\$ per ton for a continuation of agricultural policies as of the late 1970s (called the reference price) and free trade.

After time for adjustment and the liquidation of existing stocks of grain, the study results indicate that wheat prices under free trade would be approximately 10 percent higher than with current policies (Table 4). The difference for 1985 is estimated to be 10.5 percent and for 1990, 6.5 per-



TABLE 4

## EFFECTS OF MULTILATERAL AGRICULTURAL LIBERALIZATION IN THE PRINCIPAL MARKET ECONOMIES AND ASEAN ON INTERNATIONAL TRADING PRICES

|                                     |                             | 1980 | 1985 | 1990 |
|-------------------------------------|-----------------------------|------|------|------|
| <b>Trading Prices, \$(1970)/ton</b> |                             |      |      |      |
| Rice                                | Reference <sup>a</sup>      | 128  | 148  | 175  |
|                                     | Liberalization <sup>b</sup> | 115  | 134  | 139  |
| Wheat                               | Reference                   | 64   | 57   | 61   |
|                                     | Liberalization              | 51   | 63   | 65   |
| Coarse Grain                        | Reference                   | 49   | 49   | 53   |
|                                     | Liberalization              | 47   | 54   | 55   |

Source: Rod Tyers, "Effects on ASEAN of Food Trade Liberalisation in Industrial Economies," Research School of Pacific Studies, The Australian National University, paper presented to Second Western Pacific Food Trade Workshop, Jakarta, 22-23 August 1982.

<sup>a</sup>Projections based on continuation of agricultural policies as of late 1970s.

<sup>b</sup>Free trade, both internationally and domestically, assumed to prevail in Australia, Bangladesh, Canada, India, Indonesia, Japan, Republic of Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, United States and European Economic Community.

cent. For coarse grains the prices with current policies were projected as lower than under free trade for 1985 by less than 10 percent and by less than 5 percent for 1990.

The results for rice prices are quite surprising--Tyers projects that rice prices would be lower under free trade than with a continuation of present policies (1982, pp. 26 and 30): "Rice prices fall, relative to the reference projection, as the effect of the removal of protectionism in the industrialized importing countries is outweighed by the removal of negative protection in South Asia, Indonesia and Thailand. The decline in excess



rice demand in the developing countries thus exceed its increase in the developing countries." In other words, the countries that have rice prices for consumers and producers that are lower than world market prices place upward pressure on world market prices. The upward price pressure exists because low national prices discourage production and encourage consumption. Such countries either import more or export less than they would if their domestic consumer and producer prices were the same as world market prices. And the net effect has been and is to increase world market prices according to Tyers' very careful analysis.

A subsequent analysis by Anderson and Tyers (1983) estimated the effects of trade liberalization in the developed market economies only. This assumption is probably more realistic than the assumption made by Tyers. The results indicate a larger differential between international prices under current policies and with free trade since the developed market economies generally subsidize agriculture and, in the majority of cases, force consumers to pay more than international market prices. The increase in wheat price was projected at 20 percent, 16 percent for coarse grains and 14 percent for rice.

Overall, the current governmental interventions in the pricing, production, consumption and trade of grains have lowered the world market prices for wheat and coarse grains though the effect on rice prices is ambiguous, depending upon which countries eliminate their interventions. For the grains the largest distortion in the generally assumed direction is 20 percent; other estimates of price increases with only partial liberalization are as low as 5 percent. Estimates of distortions of approximately 10 percent seem reasonable. And it is pertinent to note that a significant part of the distortion results from the policies of those who argue most strongly that



international market prices fail to reflect the underlying supply and demand condition in the world.

The second reason noted earlier that governments use to justify intervention in prices and international trade is that international market prices are highly variable. There has been considerable analytical and empirical work undertaken that supports the view that a significant percentage of international price variability is due to governmental policies; production variability fails to explain most of such variability. Rightly or wrongly, I am given the credit for developing the analysis that concluded, that national efforts to stabilize domestic prices to producers and consumers by varying the volume of international trade, equates supply to demand at the set price (Sarris and Freebairn 1983, p. 214). The analysis is very simple. If a country fixes a price and equates demand and supply at that price by changing its imports or exports of the commodity, there are two factors at work. First, all of the domestic instability of either supply or demand is transmitted to the world market through the required variations in net trade required to equate supply and demand at the fixed price. Second, when there are variations in world production and/or demand, a country that follows a policy of price stabilization insulates its domestic market from those variations. In other words, neither its producers nor consumers react to the price changes that occur in the world market, including those that result from their internal variations. Consequently only a part of the world's producers and consumers must absorb the variability of demand and the supply for the entire world. It naturally follows that in that part of the world that prices are much more variable than they would be if all of the world shared in the variability.

Some of the studies, as well as other work that could be cited,



speak directly to the effects of domestic price stabilization measures achieved through trade interventions and the instability of world market prices. Tyers, using a very large number of simulations, estimated the variability of prices if present policies were continued and if there were free trade in the OECD economies, ASEAN and certain other developing countries. In eight of the nine comparisons, price variability was significantly higher with existing policies than with free trade (Table 5).

Tyers and Anderson (1983) made similar estimates for the situation in which the developing countries did not participate in the free trade regime. For the long run, the pairs of the coefficients of variation of prices were as follows by grain with the first figure being the estimate for continuation of present policies (in percent): wheat (51 and 23); coarse grains (21 and 14); and rice (33 and 26).

Schiff's estimates of the price variability resulting from a continuation of current policies and free trade among the industrial countries for wheat are very similar to those obtained by Tyers and Anderson. Schiff's estimates referred to what might have occurred from 1960 to 1980. He found that the actual coefficient of variation for wheat prices was 46 percent; with free trade it was projected to be 24 percent.

There has been other work that analyzed the sharp price increases for grain that occurred between 1972 and 1974 (Grennes, Johnson and Thursby, 1978; Shei and Thompson, 1977). I do not see how there can be any doubt that national programs that stabilize domestic prices operate at the cost of increased price variability for the international markets and for those producers and consumers whose prices are related to the international prices.

It is relevant to note that the amount of protection provided agriculture is of little importance in international price variability; it is



TABLE 5

EFFECTS OF MULTILATERAL AGRICULTURAL LIBERALIZATION IN THE PRINCIPAL  
 MARKET ECONOMIES AND ASEAN ON THE VARIABILITY OF INTERNATIONAL  
 TRADING PRICES

|   |                             | 1980                  | 1985 | 1990 |  |
|---|-----------------------------|-----------------------|------|------|--|
|   |                             | ----- (percent) ----- |      |      |  |
| Coefficients of Variation<br>of Trading Prices <sup>a</sup> |                             |                       |      |      |  |
| Rice  | Reference <sup>b</sup>      | 28                    | 34   | 29   |  |
|   | Liberalization <sup>c</sup> | 15                    | 8    | 12   |  |
| Wheat   | Reference                   | 44                    | 44   | 48   |  |
|   | Liberalization              | 35                    | 21   | 28   |  |
| Coarse Grain  | Reference                   | 24                    | 22   | 21   |  |
|   | Liberalization              | 14                    | 15   | 20   |  |

Source: Rod Tyers, "Effects on ASEAN of Food Trade Liberalisation in Industrial Economies," Research School of Pacific Studies, The Australian National University, paper presented to Second Western Pacific Food Trade Workshop, Jakarta, 22-23 August 1982.

<sup>a</sup>The coefficient of variation is derived from estimates of trading prices and the standard deviation of the trading prices. The coefficient of variation is the standard deviation divided by the mean trading prices for the particular year and policy regime.

<sup>b</sup>Projections based on continuation of agricultural policies as of the late 1970s.

<sup>c</sup>Free trade, both internationally and domestically, assumed to prevail in Australia, Bangladesh, Canada, India, Indonesia, Japan, Republic of Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, United States and the European Community.



the form of protection and not the amount that is important. Consequently, if a country's tariff were 50 percent of import prices, that country's policies would not contribute to price variability in the rest of the world. But a country that provided no net protection to agriculture but stabilized internal prices would add to world price instability.

### Grain Trade in the 21st Century

Up to this point I have tried to make the case that current national grain price and trade policies are not justified by the arguments made for those policies. International market prices of grain are not, on the average, seriously distorted. The prices of wheat and coarse grains are lower due to the interventions, but by about 10 to 15 percent, not a quarter or a third. In any case, the degree of distortion seems insufficient to justify many of the interventions that we see today.

Further, while international market prices are quite unstable, some significant part of that instability is the result of governmental policies that stabilize domestic prices by means that increase the instability faced by others. An analogy may well be helpful, even if it is one that many will find uncongenial. There are cases where air pollution created in one country has significant adverse affects upon a neighboring country. One such controversial case, acid rain, adversely affects relations between Canada and the United States. Canada feels it well within its national rights to vigorously protest the failure of the United States government to take adequate steps to reduce the amount of acid rain. Why is not the analogy of international impacts of air pollution applicable to consideration of the effects of a country's policy to stabilize its domestic prices by forcing another country to bear increased instability as a result? Just as one



country can be expected to take measure to reduce its pollution and its adverse impact upon its neighbors, a country can be expected to reduce or eliminate that part of world price variability that it causes and then imposes upon others.

If I have made a convincing case that many of the present forms of intervention in international trade in grains are not justified by valid arguments, do I believe that there will be a significant modification in the way that grain trade is organized in the years ahead? Not necessarily. In fact, I believe that of three broad categorizations of how grain trade will be conducted at the turn of the new century, the most probable is a continuation of the present set of policies and programs by the major grain trading countries. The other two main alternatives--international agreements to significantly affect the level and variability of prices and to influence the location of world grain production or significant liberalization of international trade in grain that would include not only a reduction in levels of protection but also changes in the form of protection--seem to me to be less probable than rather minor tinkering with present programs and policies.

While I believe that most of the present policies are not justified by the arguments used to justify them, this does not mean that these policies will be substantially modified in the years ahead. These policies serve the interests of certain groups in each country. The policies and programs do not exist as an accident. Some powerful and influential groups would be adversely affected by substantial modification of them. And, if we think about it a bit, it is probable that these groups include others besides farmers. In fact, for some aspects of the national policies, such as the flour export subsidies used by the European Community and the United



States, the beneficiaries are not farmers at all but processors.

I do not mean to imply that current farm and trade policies will continue unchanged. If for no other reason, these policies have become very expensive and are pressing against budgetary constraints as well as, in many cases, imposing substantial costs upon consumers. Roughly speaking, in 1983 the governments of the United States and the European Community had farm policies that cost their taxpayers and consumers a minimum of \$80 billion and when one adds similar costs for Japan (\$21 billion) and the USSR (\$60 billion), the total for the big spenders came to at least \$160 billion (Johnson 1983a). In both the United States and the European Community the high budgetary costs of the farm programs have brought forth modest efforts to reduce costs. The steps taken in the near future are likely to prove insufficient to meet budgetary objectives and further changes will surely be required. In most cases, these changes will result in some reduction in the output encouraging features of the programs. At the present time, it is not possible to say how far the modifications will go. But it is not very likely that there will be major modifications of current policies. Costs may be reduced to or kept at politically acceptable levels, but in all cases the "politically acceptable level" of costs seems to be substantially greater than zero.

If this is the alternative, we can expect continuation of significant governmental intervention in pricing, production and trade in grains. While protection levels, as a percentage of world market prices, may diminish, it is not clear the sources of tension that now exist among countries with respect to agricultural trade will diminish appreciably. In most of the industrial market economies--Japan may be an exception--even with significant reductions in the level of protection and output increasing incentives,



production will continue to increase more rapidly than domestic use. Consequently the competition for the slowly growing import market for grains is likely to increase rather than diminish over time.

While it seems reasonable to assume that the financial burdens resulting from the subsidization of urban consumers in the Centrally Planned Economies will eventually result in a reduction in the size of those subsidies, there is no basis to assume that except for Hungary there will be any tendency to move away from state trading in grains and agricultural products. Even Hungary, with all of its efforts at reform, must undertake major changes in its price policies for grain and grain products before it can have reasonably free export and import of grain by individual enterprises. Nor is it likely that the process of reducing the cost of the urban food subsidies will be accompanied by acceptance of consumer prices for major foods that vary with supply and demand conditions in the particular country, let alone in the world as a whole.

The alternative of international agreements is meant to include an agreement that requires the signators to agree to take action, under defined conditions, with respect to prices, storage and, perhaps, levels of exports and imports, and supply management. The liberalization of trade could also result from one or more international agreements or through actions of governments driven by budgetary cost considerations or a somewhat rare concern for the interests of consumers.

We have had considerable experience with efforts to negotiate international grain or wheat agreements. Based on more than three decades of experience, one has to attach a relatively low probability that an agreement that involves more than consultation or discussion will be in place by the turn of the new century. The conflicts of interest between exporters and



importers and among the exporters are substantial and real. In addition, there seems to be an inability to reach agreement about the probable course of developments in world grain markets. This was clearly illustrated by the 1978/79 negotiations when the exporters held out for a higher price range than the importers would agree to. The price band proposed by the exporters--\$150 to \$210 per ton for an average of export prices--has turned out very well though for the wrong reasons. The failure to express the price bands in deflated prices implied that real international wheat prices were expected to decline at approximately the same rate as the general increase in prices in the United States. In all likelihood, of course, the discussions simply failed to reflect the possibility of continued inflation in the industrial countries. In fact, the price movements for wheat have generally been in the \$160-\$200 range for consultations and has not moved outside the band that would call for either stock accumulations or stock releases if the agreement had been put in force.

One reason an international grain or wheat agreement is so difficult to negotiate is that such agreements require modifications in national policies of several countries. As W. M. Miner (1984, p. 13) has stated so well:

However, national policies are unlikely to change quickly. The policies and marketing systems of each country have developed in response to production and marketing characteristics of the country and its social and economic structure. . . . governments in past grains negotiations have been unwilling to accept obligations relating to domestic policies . . . It appears evident that any new steps to improve international co-operation in the grains trade must begin through consultation and coordination of national policies as they affect this business.

The third alternative is that of significant liberalization of world trade in grains. This alternative, as does an effective international grains agreement, requires modification of national policies. Unless



governments of the major exporters and importers of grain decide that it is in their own interests to change these policies, there is little reason to expect more liberal trade as of the beginning of the new century. It is well known that little or no progress has been made in reducing barriers to trade in grains in the several GATT negotiations over the past three decades. Except as current programs impose unacceptable costs domestically, there is little reason to anticipate any downward trend in protection and changes in the kinds of interventions. There is little or no evidence that governments give any significant weight in their decisions concerning the influence of their programs upon producers and consumers in other countries. This should perhaps not come as any great surprise, but some of us more idealistic types have trouble accepting it.

As has been argued above, a significant liberalization of the grain trade would substantially reduce the variability of world grain prices. Price stability is an objective that many individual governments value and pursue. However, many tend to pursue this objective in a manner that increases instability for others. There is one method of achieving domestic price stability that contributes to stability for others. This method is stabilizing domestic prices by being willing to buy at a fixed price and to store sufficiently large quantities that there are adequate supplies to meet all purchases at a somewhat higher fixed price. This approach, followed by Canada and the United States, during the late 1950s and all of the 1960s resulted in a remarkable degree of price stability in world markets for wheat and the coarse grains. It has been the unwillingness of these governments to incur the costs of holding such large stocks since the mid-1970s that has resulted in a much higher degree of price variability in recent years than prevailed in the earlier period.

There is a fourth alternative that might emerge. It is hardly new



and some might consider it simply as an extension of current national policies. I refer to an increased role for bilateral agreements covering grain imports and exports. With the growing importance of the Centrally Planned Economies, especially USSR and China, in grain trade during the 1970s, there has been a large increase in the importance of such bilateral deals. It is becoming recognized that such agreements can and may contribute to price instability for those who buy and sell in the residual market. If grain supplies tend to increase more rapidly than grain demand, the resultant downward pressure on prices may well induce exporters to vigorously pursue bilateral agreements, perhaps making them more restrictive than most of the agreements now in force. By more restrictive, I mean more rigid limits on the volume of trade and some commitment concerning prices. The agreements now in force appear to eschew prior agreement on price, letting market prices as of the time of shipment determine the transfer price. This seems to be one of the few instances in which most governments recognize that markets have a useful function.

Such agreements have the potential to increase the feeling of insecurity of those countries that do not have such a bilateral arrangements. It is possible, though the situation has not yet occurred, that the minimum purchase requirements under all of the existing or potential bilateral agreements could be large enough to put upward pressure on world prices. If this were to occur, some countries could obtain the quantities that they desire only by paying relatively high prices. But this feature of bilateral agreements is unlikely to limit the use of such agreements.

#### Concluding Comments

In this essay I have not addressed the effectiveness of the national policies of price supports, deficiency payments and income supple-



ments in increasing the incomes of farm families. Elsewhere I have argued that these measures have at best temporary effects upon the level of returns to farm workers and farm operators though there are long run effects upon the price of farm land or whatever other reasonably fixed factor is required to participate in the programs, such as an output quota. But in the long run, most of the gains go to the owners of land or quotas who owned the land at the time the higher output prices went into effect or were given the quotas at the inception of the quota program. New entrants into agriculture thus do not even benefit through capital gains on the value of land or the value of quotas; in fact, these capital gains as realized by others become a part of their capital costs of farming (Johnson 1973, 1984).

I conclude that the growth of world trade between now and the end of the century will be far slower than the extraordinary growth of the 1970s. Grain prices in world markets will continue to decline in real terms because supply will grow somewhat more rapidly than demand.

Governmental intervention is now pervasive in world grain trade, perhaps somewhat more on the import side than for exports. The interventions are to a considerable degree a function of domestic agricultural policies and significant liberalization of international trade in grain will require modification of domestic farm programs. It is also true that an international grain agreement, either for all grains or for wheat, requires modifications of domestic policies. The unwillingness to make such modifications has been one of the factors that has prevented reaching agreement in recent years, though differences in opinion concerning the prospective course of grain prices and who should bear the costs of holding stocks and managing supply may have been of equal importance.

Consequently I conclude that the most likely organization of world



grain trade at the turn of the century will be a continuation of present forms of governmental interventions. If there are changes in domestic programs, the reason will not be to facilitate either an international agreement or trade liberalization but because the budgetary costs of current programs reach unacceptable levels. But even then it is likely that the changes in domestic programs will be no greater than required to hold costs at politically acceptable levels.



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Ottawa, June 29 th, 1984

INTERNATIONAL WHEAT COUNCIL

- FORUM OF THE CENTENARY -

Subject : The world grain trade beyond 2000,  
a West European viewpoint

*Bruno CATTON,  
Director General of Union Nationale  
des Coopératives Agricoles de Céréales  
(France)*

The challenge of this symposium, organized by the Canadian Government on the occasion of this 100 th Session of the International Wheat Council, consists in anticipating the future and contributing to a reflexion on policies that must be followed with respect to grain, which is vital both for the well-being and security of the world.

The forum where this issue is raised is a prestigious one, so that it cannot be approached as an irresponsible exercise in futurology. Indeed, let me take advantage of this opportunity to bear witness on behalf of the grain industry of our gratitude and appreciation of your institution. Its independance, its responsibility, the quality of its staff are recognized by all and it constitutes a unique forum.

Now, let me state that French cooperatives had been hoping, for efficient, international agreement on grain, and are very disappointed to see that the member countries failed to introduce organisation into the world grain trade. And yet this was, indeed, the objective that the Government of Argentina, Australia, Canada, the United States and the United Kingdom had set for themselves in the spring of 1942, when they drafted an International Wheat Agreement to be submitted to nations that had significant interests in wheat trade, once the hostilities were over.

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When reading this draft, one realizes how much our thinking has altered and perhaps not in the right direction (1).

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The topic of my presentation to-day is to give an European approach to the "world grain trade beyond 2000". It is a provocative theme at a time when in most lines of activity and in most countries, the key words are uncertainty and concern. Uncertainty, because the reference system we had during the past twenty years collapsed, and concern because the prospects for the next twenty years are uncertain.

That comment applies across the board, including to grain related activities. This climate of uncertainty is new for the present generation, in Europe, where they had no doubts as to the necessity and the desirability of a constant development of production.

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(1) The annual 1963/64 report examining the prospects for commodities agreement stated :

"The Council took the opportunity of this yearly review to make a survey of public opinion on the role of commodity agreements. The Council recognized that, at the present time, there was a trend favoring an enlargement of the scope of these agreements, with the purpose of increasing their efficiency, which would have been impossible five or ten years earlier. Ideas have evolved on this issue and have become more liberal. This optimistic state of mind should not be wasted. The Council welcomes those indications which point towards a new approach to commodity agreements".

We are amongst the people who regret that the "optimismus" of these days never materialised into facts. We fully agree with the Director General for Agriculture of the European Economic Community who considers that the subject should be back on our agenda, on new bases to be discussed.

The remarkable report of I.W.C.'secretariat on "Long-terms prospects for grain" (document n° 14 - 1984) rightly says in its conclusions : "Progress in that direction, however modest, is the best hope for producers and consumers alike.



Yet other generations were confronted to a similar situation. A few quotations from official documents testify to that :

- In 1942, the preamble of the draft International Agreement on wheat, adopted by the five signatory Governments, opens with these words : "As regards the production and the market for wheat, prospects are such that the accumulation of wheat surplus threatens to bring serious economic difficulties in the producing countries after the war and then, in all countries due to the interdependance existing between nations.

- In 1962, the annual report of the International Wheat Council notes that world trade will reach a record level of 50 million tons and considers that it is a cyclical event.

We cannot but consider that,

in the past, alarmists have always been wrong, with respect to grain. This is why, in the current period of crisis and uncertainty, the I.W.C. secretariat's new approach (document n° 14) which foresees a recovery -but a slower one- in demand and world trade, seems both prudent and realistic. And it is by reference to this study that we shall give a "West European point of view".

It is difficult to identify such a view point since Western Europe does not exist in agricultural terms. There is, on the one hand, the European Economic Community with its ten member countries and the non-member countries on the other hand. It is the reason why I shall essentially speak from the standpoint of the European Community, while giving a special place to the European continent from Gibraltar to the Ural mountains and also to African and Mediterranean countries which were led by geography, economy and even more by history into close relationship with Europe.

Before turning to the prospects for the next twenty years, I would like to give you my own views on some typical facts about the evolution of grain economics during the past twenty years and about the current situation. It is based on these observations - which are not neutral but certainly inspired by my French nationality and my position within a cooperative undertaking which is also an exporter - that I would like to raise a few issues regarding the future, to try and understand it better, from a qualitative more than a quantitative stand.

A few typical facts about the past evolution of grain economic that will condition the situation beyond 2000

1°) One of the essential points during the recent period was the emergence of the concept of food security and independence. This event was amplified by the end of the colonial era and also towards the end of the 70's, by the introduction of the notion of "food-weapon", an aggressive version of "green power", in the diplomatic language.

.../...



Three consequences resulted from this :

- To a certain extent politics were brought into the grain trade and things came to a head with the embargo.
- State intervention developed with the purpose of influencing production levels and controlling trade.

All grain policies, in all countries are distinguished by state intervention. To try and limit dependence from grain imports is a major objective for importing countries. At the same time, most exporting countries wish to increase their production, since it used to be, and still is, a relatively safe means to improve the trade balance of the country, which is a major concern, particularly at a time of crisis. Free-trade for grain and, in general, for most agricultural commodities only exists in theory. Every country organises the market according to its own objectives.

For some, the concept of independance is the first priority, for others, it is power, for others yet, it is the safeguard of civil peace and preserving a state of social balance. All these reasons are currently stronger than the theory of compared advantages. Governments try to influence supply and demand.

State intervention takes very diverse forms, including in basic trading activities (1).

This should not change during the next twenty years.

- A third consequence of the growing concern for food security is that countries that can do so -namely that have the financial or political means- want to diversify their sources of supply to limit the effect of political pressures (embargo) or those of climatic accidents (drought). It is an essential point for the future of exports made by the European Economic Community beyond 2000.

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(1) . in 1980, 75 % of wheat imports were made by Government Agencies in 52 countries. Almost half the quantities bought in this way were purchased by countries with an non-centrally planned economy. The same goes for 50 % of feed grains. The case of Japan is of particular interest : wheat is imported by the Japanese Food Agency, while feed grain is imported by private operators submitted to a very strict quota policy.

. The International Wheat Council noted the existence of over 25 bilateral agreements, made at governmental level, for about 45 million tons per year (more than 20 % of world trade).

. The tools created during the crisis of the thirties (Canada Farm Bureau 1931, C.C.C. 1933, ONIB in France 1936, Australian Marketing Board 1939,...) continue -directly or through bodies which replaced them- to play an essential role.



2°) Another major fact, in the past 10 years, is the great instability of prices.

Since 1972, the ups and downs of supply and demand and the free fluctuations of the main trading currency have combined their effects to increase yearly price fluctuations (sometimes twofold, and quite regularly by 20 or 40 %).

These fluctuations are amplified and their number is multiplied by the full and rapid information given to all commercial partners and also by the growing volume of business made on future markets, by non-professional speculators (close to 70 % according to some estimates), who blindly obey the conclusions of methods for technical analysis.

The result has been increasing risks for the operators, the withdrawal or collapse of a number of nation-wide importers or exporters, and more than before, a growing concentration of international trading operations into the hands of a few large companies. This is a significant trend in Europe and seems to be a persistent trend for the future (!)

3°) With the recent developments in the international crisis, new phenomena will raise problems in the future : the financial capacity of the buying country which has two consequences : sales on credit terms (Government or bank loans) and barter compensation operations.

New forms of competition appear between countries and companies depending on whether they are willing and able to do this type of deal. In the short term, we will have to worry about the impact it would have on the volume and geographical structure of international trade if such a phenomenon was to grow. According to the I W C's forecast, the developing countries should account for the two-third of world imports, twenty years from now.

This means that in the medium and long term, world trade in grain requires an improvement of income in developing countries before it can grow.

For many among them, such an improvement will only be achieved to begin with, through the development of their agriculture, thanks to protective measures at the borders, so as to raise the price paid to farmers as an incentive to produce more.

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(1) It is one explanation among several for the intervention although modest of cooperatives on international markets as compared to their important part they play on national markets.



4°) The development of grain consumption by animals and in particular the change in feeding techniques (from grazing to compound feeds) are the major elements involved in the growth of grain trade and consumption. (1)

Furthermore, the European Community's example shows that a new fact must be considered when looking at the development of animal consumption : the existence of substitute products (manioc, corn gluten feeds, citrus pellets...). The production of which can grow.

Imports of those products into the European Community were not significant in 1960, they reached 16 million tons in 1982, of which 4,5 million tons of tapioca, 3,6 million tons of corn gluten feed and 1,5 tons of citrus pellets. Those imports have been substitutes for corn imports and for an increased consumption of European feed grain. In some European regions, compound feeds which in 1960 were made with 63 % grain, 13 % soya cakes, are now made with 16 % grain, 29 % soya cake, 15 % manioc, 12 % corn gluten feed, 7 % citrus pellets, etc...

Therefore, the issue of grain in the European Community and possibly in the world to-morrow can no longer be approached without taking into account this phenomenon.

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(1) Feed grain which accounted for less than 20 % of world trade (excluding rice) in 1950, account for 50 % of that trade since 1970. This percentage went down during the last three years as a consequence for the international crisis which made meat consumption drop.

In 1980 uses other than human consumption accounted for 75 % of total consumption in western developed countries (333 million tons out of 446), 77 % in Eastern European countries with a centrally planned economy (236 million tons out of 306), 23 % in Asian countries with a centrally planned economy (62 million tons out of 262) and 24 % in developing countries (106 million tons out of 407).

The world average is at 40 %. It is, beyond dispute, the development of animal consumption which will remain the main cause for the increase in world consumption of grain and oil seeds (the world trade in soya flour, meal and seeds was insignificant after the war and has now reached a level of more than 50 million tons).

But this basic trend will only materialize if appropriate solutions are found, in order to improve both income levels and the financial situation of developing countries. In many instances, it can only be achieved through a raise of the farmer's income. If such progress fails to be made, the international Community will have to solve major difficulties, that will lead to a durable stagnation of agriculture in exporting countries and to the spreading of under-nutrition in the world.



5°) As far as grain uses are concerned both new and traditional uses seems to be underestimated.

We are presently witnessing a rehabilitation of bread and of products of this type in countries where per capita consumption had steadily been going down. At the same time, in countries where little bread was eaten, it is gaining ground, keeping pace with the rate of urbanisation in developing countries (26 % of their population lived in cities in 1970, it will be 36 % in 1990) and is partially substituted for rice in Asian countries.

We are also witnessing a rapid development, which could go even faster, of all starch industry products : corn gluten, ethanol, high fructose syrup.

In 1975, the world production of high fructose syrup was 600 000 tons, it is now 4,2 million tons and will reach 5,2 million tons in 1985.

It has been estimated in Europe that it would use up 15 million tons of grain to substitute 5 % of the fuel now burnt with agricultural ethanol. Such a prospect would obviously depend on the cost of oil, but it might also be promoted by new regulations which provide that lead will be replaced by a less toxic product before 1990.

6°) The volume increase of international transactions was accompanied with sizeable commercial and logistical modifications.

Countries that buy large quantities place contacts for millions of tons with some private operators but contracts where the unit is 100 000 tons are very common.

Meanwhile, the average size of grain transport ships grows larger.

This evolution, combined with price and currency fluctuations, has increased the financial risks borne by importers and exporters and has contributed to the elimination of the weaker and less experienced companies. It gave more importance to the capability to mobilize large quantities of produce over long periods of time at the farmer's level.

The cooperatives have this capacity because of their very nature, but most do not have the experience required to confront the risks existing on the international market. This observation led some European and American cooperatives to try and devise original solution to access this market.



## Europe

The French grain producers (AGPB) held their annual convention eight days ago.

This sentence apply gives, in a nutshell, the opinion of EEC grain producers. They recognize the existing tension on world markets, due to a stagnation of demand, but consider that in terms of outlets -if not in terms of income- medium and long term forecasts are in their favour. But it requires that their exports to the very large markets that surround them to the East and to the South are not reduced by exports limiting measures, whose merits they deny completely (1).

European Community ranks first amongst world barley and malt exporters but, before anything else, it is a wheat and flour exporter on the international market. Its main concern in the next twenty years will therefore be to find outlets for the wheat which it will produce in larger quantity

Before trying to see how it will solve this problem, I would like to make a few comments on the volume of imports into the European Community.

The most commonly held idea is that in developing its grain production the European Community has substantially cut back its imports. This cannot be disputed if we only consider grain (the EEC imported 25 million tons of grain from 1960 to 1975) but it is completely untrue if we consider -as is logic- all food imports, whether for humans or for animals (grain, substitution products and soya). In doing so, we note that imports made by the Community amounted to 29 million tons in 1960, 38 million tons in 1970, 45 million tons in 1980, that is to say as much as the Soviet Union for the same products at the same time.

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(1) I agree with their analysis and like to show why it is realistic when looking to the future beyond the year 2000 : the European Community will then be confirmed in its rank as third or second exporter world wide, and first or second largest importer of products for animal feeds. The Community will, therefore, be durably open to world trade, imports and exports alike.

A few figures give a clearer view of the issue :

During the 1980-83 period, grain production within the European Community account for slightly more than 10 % of the world production (124 million tons). Essentially wheat : 48 % (60 million tons), barley : 32 % (40 million tons) and corn with a smaller share 15 % (20 million tons).

Wheat and flour exports amount to 15 million tons (15 % of world exports) and to 6 million tons for barley and corn (31 % of world exports).

Wheat imports amount to 4 million tons and corn imports to 7 million tons during this period.



It was the evolution in animal production technologies, the availability of large quantities of cheap new products (tapioca, corn gluten feed) which brought about this reduction in grain imports, not the increase of European production.

In spite of the price policy enforced during several years (price increasing more slowly than the costs) European production should continue to grow.

According to various surveys, the increase could be around 20 million tons in 1993.

Given the imports, the balance available for export to the world market would be 25 to 30 million tons. The balance would essentially be composed of wheat ; the export increase would thus be 5 to 10 million tons.

Since we have no reliable forecasts for the year 2000, let me simply note that the International Wheat Council estimates that world trade in wheat will then be 112 million tons. The Community's share in that trade, based on the 1993 forecast, would be 18 to 22 %. These figures seem quite reasonable, considering the Community's position at the center of a deficit area where grain is concerned, and considering that contrary to other countries, it does not trade feed grains; the market for feed grain being the one with the best growth prospects.

We think that European grain producers should not have any major problems selling this additional production.

A few reminders of Economic Geography to support this statement :

- Countries of the European continent (East and West) have a population of 755 million people.
- North Africa and the Near East have a population of 220 million people.
- Central Africa has a population of about 180 million people.

Within a radius of less than 4000 km around Paris, there is more than 1 billion people, that is to say one quarter of the world population.

In 1978/80, grain production in this area was around 500 million tons, that is one third of the world production (1). The balance between

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(1) Rice included.



imports and exports, for that area and at that time showed a deficit of about 80 million tons. According to some surveys this deficit could reach 110 million tons in 1993. (2)

As regards wheat in particular, that area imported 48 million tons per year from 1980 to 1982, that is close to 50 % of the world imports.

European grain producers have "within their reach" a market three times larger than the grain available for export, a market made of countries mostly wishing to have diversified sources of supply. It justifies their confidence in the future and their wish to see the Community adopt, as far as they are concerned, a policy that will enable them to seize this opportunity.

In addition to such a policy, multiannual supply agreements should be signed abroad with the main buying countries, as other major exporting countries have been doing for many years.

Cooperatives will participate in a major way in these European exports next to and jointly with international companies.

It is an important objective in their strategy.

#### Try and organise the future rather than submit to it

It seems that for the next twenty years three facts will prevail in the grain trade.

- State intervention will remain active within a context of increased competition and tension between exporting countries.
- A high degree of instability linked to a large potential increase of supply occurring simultaneously with increased import requirements, but in countries where financial resources are inadequate.
- Persisting under-nutrition for a large share of the world population for whom the concept of food security is an unattainable privilege.

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(2) Spain and Portugal might soon enter the Community ; they are part of the area which imports 1 million tons of wheat and 8 million tons of coarse grain.



The international community cannot, must not, remain passive in such a context. It is under an obligation to look for ways and means to provide greater food security for all, through the expansion of production and a reasonable market stability that will give confidence to producers and to consumers alike.

This is the mission before the International Wheat Council. It has to face up to this extraordinary challenge, extraordinary because of its political and human implications. It must prepare the instruments for such a policy, which is part and parcel of a more general issue : that of relations between industrialized and developing countries. (1)

The aim is to organise the future, rather than submitting to it.

And this is why I fully support the conclusion of the survey made by the IWC's Secretariat on 'the long term grain outlook' (Secretariat paper n° 14 - 1983). It is full of simplicity and common sense :

"The political will of governments to meet the longer-term objectives of market stability and food security has often had to bow to the pressures of irreconcilable immediate interests. Nevertheless, there is now a much greater awareness of the difficulties with which the grain economy will be confronted in the future. The search for mutually acceptable solutions to these problems must continue. Progress in that direction, however modest, is the best hope for producers and consumers alike".

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(1) The Director General for Agriculture of the European Community : M. VILLAIN recently proposed to re-open negotiations for a new international Agreement on grain.

As to President EL ADAB (Tunisian Grain Board) and Hadj Mokhtar LOUHIBI, newly elected Chairman of the I.W.C., they presented in "World Grain" comments of a general nature which all came to the idea that a debate on a new international agreement should be opened.



# THE CENTENNIAL FORUM LE FORUM DU CENTENAIRE

WORLD GRAIN TRADE BEYOND 2000 AND  
FOOD NEEDS IN THE DEVELOPING WORLD

By

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At the special Symposium "THE CENTENNIAL FORUM"  
to celebrate the 100th Session of the  
International Wheat Council

OTTAWA

June 28 - 29, 1984

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



WORLD GRAIN TRADE BEYOND 2000 A D

...

FOOD NEEDS IN THE DEVELOPING WORLD

...

By

T U Vijayasekharan

Additional Secretary to the Govt of India  
Department of Food New Delhi

at the

Symposium to celebrate the 100th Session  
of the International Wheat Council, at  
Ottawa on June 28-29, 1984

.....

GENERAL

I (a) Any attempt in trying to forecast the pattern of world grain trade beyond 2000 A D and the food needs in the developing world 15 to 20 years hence will have to be on the basis of some reliable estimates relating to trends in grain production, rates and patterns of consumption, flow of food aid and other related factors.

(b) A fair assessment of these can be made with reference to specific countries where there is reliable statistical base. The first problem in assessing the food needs of the developing world is that the phrase "developing world" itself is rather nebulous. The FAO have indicated that the words 'developed' and 'developing' are intended mainly for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process.

(c) Keeping in view the normally accepted definition of the developing world, it could mean countries whose per capita income is below a particular level. These countries stretch practically across all the continents and the reasons for their low income are also varied. Keeping in view the subject of discussion and the country from which I come, I would attempt a forecast based on the experience of India. This could serve as a model in estimating the production, trade, etc of the other "developing" countries.



(d) India is a big country, the seventh largest in the world, with an area of 3.29 million square meters and also the second most populous country with an estimated population of a little over 700 million persons. The past experience of India in meeting its food needs could be applied with a degree of relevance to the South Asian Region where the agro-economic climatic conditions are broadly the same than to other small developing countries which are in different continents.

PRODUCTION AND  
POPULATION  
BACKGROUND

II (a) At the time of Independence in 1947, India produced around 52 million tonnes of foodgrains including pulses. For quite some time, the country was a net importer of foodgrains to the tune of about 3 million tonnes per annum.

(b) High in the list of priorities of the Government was to increase production of foodgrains. The efforts made by the Government showed results when foodgrains production in the country increased from about 52 million tonnes in 1951-52 to 82 million tonnes in 1960-61 and to 89.3 million tonnes in 1964-65. The tempo of agricultural development and increasing production of foodgrains was further accelerated with the introduction of high yielding dwarf varieties and hybrids of cereals in mid-sixties. The total foodgrains production in the country is expected to reach a new high level of 150.6 million tonnes during 1983-84 as against 131.9 million tonnes during 1978-79. Of this, rice is expected to be about 59.95 million tonnes and wheat, about 45 million tonnes. The growth of total foodgrains production during successive Five Year Plan in India is shown in the table below :-

PRODUCTION OF FOODGRAINS

(million tonnes)

| Year    | Rice | Wheat | Others (including pulses) | Total   |
|---------|------|-------|---------------------------|---------|
| 1965-66 | 30.7 | 30.9  | 10.4                      | 72.0    |
| 1966-67 | 30.4 | 11.4  | 32.4                      | 74.2    |
| 1967-68 | 37.6 | 16.5  | 41.0                      | 95.1    |
| 1968-69 | 39.3 | 18.7  | 35.5                      | 94.0    |
| 1969-70 | 40.4 | 20.1  | 39.0                      | 99.5    |
| 1970-71 | 42.2 | 23.8  | 42.4                      | 108.4   |
| 1971-72 | 43.1 | 26.4  | 35.7                      | 105.2   |
| 1972-73 | 39.3 | 24.7  | 33.0                      | 97.0    |
| 1973-74 | 44.1 | 21.8  | 38.8                      | 104.7   |
| 1974-75 | 39.6 | 24.1  | 36.1                      | 99.8    |
| 1975-76 | 48.7 | 28.9  | 43.7                      | 121.3   |
| 1976-77 | 41.9 | 29.0  | 40.3                      | 111.2   |
| 1977-78 | 52.7 | 31.8  | 41.9                      | 126.4   |
|         |      |       |                           | ....3/- |



| Year    | Rice  | Wheat | Others(includ-<br>ing pulses) | Total<br>(million tonnes) |
|---------|-------|-------|-------------------------------|---------------------------|
| 1978-79 | 53.8  | 35.5  | 42.6                          | 131.9                     |
| 1979-80 | 42.3  | 31.8  | 35.6                          | 109.7                     |
| 1980-81 | 53.2  | 36.3  | 40.4                          | 129.9                     |
| 1981-82 | 53.2  | 37.5  | 42.6                          | 133.3                     |
| 1982-83 | 46.5  | 42.5  | 39.4                          | 128.4                     |
| 1983-84 | 59.93 | 45.00 | 45.17                         | 150.6                     |

(c) Wheat production in India has increased to almost seven times (from 6.5 million tonnes in 1950-51 to about 45.00 million tonnes in 1983-84). Rice production has almost tripled during the same period.

(d) The compound growth rate of production of foodgrains during 1967-68 to 1983-84 is 2.58% per annum whereas the population growth rate has been at the rate of 2.24% per annum during the decade 1971-81. In the case of the two important cereals, wheat and rice, the growth rates have been 5.73 and 2.23% per annum. However, the growth rate of pulses in the country has been somewhat slow and this is engaging special attention.

(e) An important element in ensuring this increase in production has been the operations of the Food Corporation of India. The Food Corporation of India which is a Government agency sees to it that the minimum support prices which the Government of India fixes on the recommendations of the Agricultural Prices Commission for important cereals of wheat and rice, are, in fact, operated upon, by entering the different village markets (mandis) and purchasing the grain from these markets at the stipulated prices whenever the market rates fall below these levels. In these days, when cost of agricultural inputs have risen and agricultural operations in the important producing areas are getting increasingly commercialised, the importance to the farmer of a 'minimum support price' at which Government agencies buy up the grain is not often fully realised.

III (a) Keeping in view the growth rates which have been achieved in the past particularly in the case of the two important cereals, rice and wheat, the ambitious schemes drawn up for increasing the areas under irrigation and making available increasing quantities of agricultural inputs as well as improving the training and delivery systems, it would not be too optimistic to assume a growth rate of



about 4% in the case of wheat and slightly lower percentages in the case of rice and other crops. An idea about the projections in or around 2000 A D along with the growth rate and the present level of production may be gathered from the table below :-

| Crop              | Base level production 1981-84(MT) | Annual compound growth rate (%) | Projected Production by 2000 AD (MT) |
|-------------------|-----------------------------------|---------------------------------|--------------------------------------|
| Rice              | 59.37                             | 2.31                            | 84.36                                |
| Wheat             | 44.62                             | 4.00                            | 80.50                                |
| Coarse cereals    | 33.76                             | 2.00                            | 45.14                                |
| Pulses            | 12.81                             | 3.00                            | 20.00                                |
| Total food-grains | 150.56                            | 2.54                            | 230.00                               |

(b) From this, it will be seen that even if we continue to retain the growth rate of 2.6% per annum or even slightly lower level i.e. 2.54%, the country's total foodgrains production by 2000 AD is expected to be around 230 million tonnes.

IV (a) An important aspect connected with meeting the food needs of the people is to ensure that there are proper delivery systems to see that the food that is available is distributed in time to those needing it. In India, the public distribution system functions through a wide network of fair price shops/ration shops which aims at supplying foodgrains to the consumers, particularly, the vulnerable sections of the population at reasonable prices. The quantity of foodgrains handled by the public distribution system during the past few years has been -

|      | <u>million tonnes</u> |
|------|-----------------------|
| 1980 | 14.99                 |
| 1981 | 13.01                 |
| 1982 | 14.77                 |
| 1983 | 16.23                 |

An important fact to be borne in mind is that the public distribution system in India is only supplemental in nature and does not attempt to meet the entire requirements of the population. In fact during the year 1982-83, only 13.26% of the total cereals produced in the country was procured for distribution through the public distribution system.

(b) The system of procurement varies but is essential in the nature of the price support operations. The foodgrains procured are stored properly with a considerable proportion



forming a "buffer" which is held in reserve to ensure stability in supply and avoid undue fluctuations in price over the years.

POPULATION PROJECTION FOR 2000 A D

V (a) The population projections have been prepared by the Registrar General of India which are given in the publication "Population Projections for 1981-1982". A separate official expert group has been set up to further refine this. However, the following are some of the important aspects of the study conducted by the Registrar general. The projections are categorised into three groups - high, medium and low. High projections are based on the premise that the couple protection level likely to be achieved by the end of March 1984, namely, 28%, will not be exceeded in the remaining 16 years of the century. This is not a plausible assumption as we have already reached 29% couple protection as per figures of performance of Family Welfare Programme during the year 1983-84. According to this estimate, the population in the year 2000 A D is expected to be around 1052 million. The medium projections are based on the estimate that couple protected may increase on an average rate of 1.3% per annum and reach 48.8% by 2000 A D. According to this, the population is expected to be around 991 million. This assumption also seems to be on the pessimistic side as there was an increase of 2.2% during the year 1982-83 and the expectation is that it will be 3% during 1983-84. It is expected that during the next 4 - 5 years, couple protection rate between 2.5 to 3% will be maintained.

(b) The low projections are based upon the assumption that a couple protection level of 60% could be reached by 2000 A D which is the goal set under the National Health Policy. Keeping in view what has been achieved in the last two years and with the increasing stress on family literacy which is being laid in the Seventh Plan - 1985-90 - and this is a critical factor - the goal set under the National Health Policy does not seem to be an over-optimistic one. According to this estimate, the population may be even somewhat lower than the 950 million assumed by the Registrar General for the year 2001 A D.



(c) According to these broad assumptions, the per capita availability of foodgrains in India for a population of a little over 950 million, with an anticipated production of 225 to 230 million tonnes, should not be less than what is available now. However, with the expected rise in income, the demand for foodgrains is likely to increase more than proportionately. There are a number of schemes which are designed to specifically raise the level of incomes of those who are treated as being "below the poverty line" now.

ANTI-POVERTY  
PROGRAMMES

VI (a) In the case of India, it is one of major objectives of Public Policies to progressively reduce and ultimately eradicate poverty in rural areas. The particular categories of programmes which have been taken up are -

Resource and Income development programmes for the rural poor like Integrated Rural Development, Training of Rural Youth for Self-Employment, Development of Women and Children in Rural Areas ;

Works Programme for creation of supplementary employment opportunities like National Rural Employment Programme, Rural Landless Employment Guarantee Programme ;

Ensuring a better deal to beneficiaries of land reforms by providing funds and services to land allottees ;

Special area development programmes like Drought Prone Areas Programme, Desert Development Programme ;

Facilities for primary and rural markets and a grid of godowns to enable small producers to get a remunerative price for their produce ;

Setting up structures to enable successful transfer of technology like Council for Advancement of Rural Technology ;

Enabling the upgrading of training resources in rural development through funding of National Institute of Rural Development and also state level apex training institutions ;



Disseminating knowledge about rural development action programmes being undertaken in various parts of the country through the house magazine 'Kurukshetra' and enabling sharing of knowledge through organisation of seminars/workshops and studies.

(b) Among the programmes, the most important are -

(i) National Rural Employment Programme (NREP) :

The National Rural Employment Programme which aims at providing supplementary employment opportunities to rural workers particularly during the lean periods of the year when they are not able to find gainful employment. At the same time, it aims at the creation of durable community assets which is expected to lead to rapid growth of rural economy and steady rise in the income level of the rural poor.

(ii) Rural Landless Employment Guarantee Programme :

This was launched in August 1983. This programme aims at providing job opportunities to at least one member of the landless family in rural India. The programme also aims at the creation of tangible assets capable of boosting production. Among the projects are rural link roads, field irrigation channels, land development, reclamation of waste lands, soil and water conservation etc. Priorities are being accorded to labour-intensive works in areas where there is concentration of landless labour.

It is expected that with these rural programmes, the incomes in the rural areas will go up fairly rapidly thereby increasing the demand for foodgrains even more than proportionate to the increase in population - particularly in the initial phase.



(c) Against this background, while the per capita availability of foodgrains is expected to be better than the present position (about 150 million for a population of 710 million) the net surplus which the country will have at the turn of the century cannot be forecast with certainty. This is so as, if the per capita demand for foodgrains remains at the level, India should be surplus but the increase in demand for foodgrains generated as a result of increases in incomes particularly amongst those who are below the poverty line now which would take place as a result of the special measures designed by the Government to remove poverty particularly in rural areas cannot be assessed with certainty. However, it is the expectation that the position of India vis-a-vis the world grain trade would not be materially different from what it is today.

INDIA'S POSITION IN WORLD GRAIN TRADE

VII. (a) India has not been a participant in a big way in the world grain trade. Considering the size of the country and her population, if per capita indicators are applied, India's participation would be very very minimal. The following table would indicate in a general way the import and export of cereals for the last five years. It would be seen that in most year, import is a very small percentage of the total production and the requirements of the cereals:

| Year    | Production | Import | / In Million Tonnes /         |                               |      |
|---------|------------|--------|-------------------------------|-------------------------------|------|
|         |            |        | Import                        | Export                        |      |
|         |            |        | as %age<br>of pro-<br>duction | as %age<br>of pro-<br>duction |      |
| 1979-80 | 101.13     | -      | -                             | 1.04                          | 1.03 |
| 1980-81 | 118.96     | 0.049* | 0.04                          | 0.22                          | 0.18 |
| 1981-82 | 121.79     | 2.19*  | 1.67                          | 0.33                          | 0.27 |
| 1982-83 | 116.78     | 1.95   | 1.67                          | 0.46                          | 0.39 |
| 1983-84 | 136.95     | 4.20   | 3.07                          | 0.02                          | 0.01 |

\* Most of the import is of wheat.



OUTLOOK FOR  
THE REGION

VIII. It is expected that the pattern of population growth and increase in production of important food cereals in the South Asia Region as a whole should broadly follow the pattern which is taking place in India. However, for other countries, particularly the developing countries in the African continent, the outlook may not be that bright and their requirement of imports and food aid may be greater than the present levels.

PRESENT POSITION REGARDING  
WORLD TRADE IN GRAINS

IX (a) World trade in wheat and coarse grains for the 1983-84 season is forecast at 186 million tonnes which is more or less the same as the previous year. The FAO have estimated that grain imports of developing countries are forecast to decline primarily reflecting a fall in the requirements of India and China. Shipments to other low income food deficit countries are likely to continue their upward trend although for many of them, imports would be continued to be curtailed by shortages of hard currencies and credit constraints.

(b) World imports of wheat in 1983-84 are now forecast at 98 million tonnes, virtually the same as in previous years. However, a larger share of the total is expected to be utilised for animal feed as high maize prices have encouraged the use of low quality wheat. Here again, the forecast is that imports into Africa are forecast to increase sharply reflecting rice in demand and poor crops in northern Africa and the deteriorating situation in many countries in South Sahara. Purchases of wheat by developed countries are forecast at 36 million tonnes, the same level as in 1982-83.

(c) World trade in coarse grains is also expected to remain at last year's level of 88 million tonnes. Coarse grains import into developing countries will be at 32 million tonnes and imports into Africa is expected to increase sharply.



(d) Developing countries produce about 40% of the world wheat, yet, two-third of the total world wheat are imported by the developing countries.

(e) As a grain, wheat is the most important grain in world grain trade followed closely by coarse grains. Rice does not form a significant proportion of the world grain trade.

(f) An interesting aspect which may have a bearing on future grain trade is the fluctuation in prices. Taking the most important grain, namely; wheat, it is noticed that international prices of wheat fluctuated erratically during the last decade. As can be seen in the price trends for U S No.1 Hard Winter variety, wheat prices suddenly doubled in 1973-74; it dropped during the period 1976-77 and 1977-78 and again rose in 1980-81 to about the same level as during 1973-74. It fell over the last two years to a little over US \$ 150 /- per tonne. The pattern of future trade of this commodity will be influenced by its price behaviour, particularly as low grade wheat is a substitute for coarse grains as animal feed.

X. (a) India's share in the world foodgrains trade (imports and exports) is not expected to go up from the position prevailing now. Even allowing for increase in incomes of the people and considering the present trends in production, the present trends in population increase may not fully neutralise the increase in production. For the South Asia Region as a whole also, if one is to attempt a forecast, participation in world foodgrains trade is not likely to be at a level beyond what is prevailing now. However, there could be an increase in the requirements of wheat if with rising standards of living, people take to non-vegetarian food in a greater measure and low quality wheat is used as a substitute for coarse grains in animal feed.



(b) For the developing countries in the South America, the position is also likely to remain stable unless their increasing balance of payment difficulties force them to reduce their level of imports.

(c) The area which would require the attention is the low income food-deficit countries on the African continent. Here, the problem, likely to be encountered is increasing requirement of foodgrains with rising expectations and without radical alteration of the terms of trade, liberalisation of credit availability and larger food aid, these countries may have to forge their increased requirements of food. Because of the agro-economic conditions, steep increases in production of foodgrains to make countries in this region to attain production levels of near self-sufficiency seems to be a very difficult task. This is compounded by the fact that in most of these countries of this Region, population control has also not met with much success. The 1984 Study of the World Population compiled by the U.N. Fund for Population Activities (UNFPA) says that despite an overall slow-down at the global level, population of many developing countries continues to grow at high rates. This state of affairs is responsible for slow economic progress, reduced incomes and diminishing quality of life of may millions of people. A particularly alarming feature of the report is that while there has been an overall decline in the average number of children pattern born to a woman from 4.5 to 3.6 over the last ten to fifteen years, the decline in developing countries was only from 5.5 to 4.1. Here again, it has been mentioned that Africa as a whole has not experienced any decline. In fact, fertility has actually risen in some of these countries. The average number of children born to a woman in Africa is put at 6.43. This, coupled with the increase in life expectancy, makes the chances of a population boom in these countries, a distinct possibility without proportionate increase in food production.



(d) From the above analysis, it will be seen that the requirements of the low income food deficit countries of African continent will be a very important factor in determining the quantum of world food trade. These countries may not be able to pay for their rising requirements and, therefore, food aid and its quantum will have an important bearing on the quantum of grain trade. In order to meet the requirements of food deficit countries, the developed countries will have to maintain large stocks. Mere availability of stocks will not be adequate as these should ultimately reach the recipients in these countries. For this purpose, liberalised credit and a more liberal food aid will have to be adopted.

(e) It is here that increasing and strengthening the Food Aid Convention assumes importance. At present, commitments under the Convention are of the order of 7.6 million tonnes. As per target fixed by the World Food Conference of 1974, this level should be at least 10 million tons. As per the recommendations of the Non-Aligned Meet, at its meeting held in New Delhi in March, 1983, the level of food aid commitments should be progressively increased to 18.5 million tons by 1985. FAO also estimates the food aid needs at 20 million tons of cereals in 1985. Keeping in view the increased requirements by the turn of the century, the contributions from donor countries will have to go up substantially if the requirements of the low income food deficit countries, particularly in African Continent, are to be met.

(f) Apart from this, there is an International Emergency Food Reserve. The U.N. General Assembly at its special session held in September 1975, had recommended, inter alia, that pending the establishment of world foodgrains reserves as envisaged by the World Food Conference, developed and developing countries in a position to do, should earmark stocks and/or funds to be placed at the disposal of World Food Programme as an emergency reserve to strengthen the



capacity of the Programme to deal with crisis situations in developing countries. The aim should be a target of not less than 500,00 tons. Keeping in view the requirements of the low income food deficit countries, it was recommended during NAM in Delhi in March 1983 that this reserve should be increased to two million tons by 1985 and also the possibility of embodying it with a legally binding Convention should be explored. Obviously, by the turn of the century the quantum of the reserve requirements should be significantly higher.

(g) I have highlighted the quantum of food aid and the quantum of the International Emergency Food Reserve because these two would have a bearing on the world foodgrains trade around the year 2000 A D as it is from these two sources that the requirements of low income food deficit countries which are unable to pay for their requirements of foodgrains is expected to be met. These would, of course, be related to other facilities made available like easier international credit for food import and other related aspects of food management like storage etc by the international agencies like the I M F, World Bank, etc.

(h) The pattern of trade as between different grains would depend to an extent on their availability. At present, in the international grain trade, wheat and coarse grains have a dominant share. Rice does not form a significant part of the trade. As between wheat and coarse grains, wheat has a greater share than coarse grains. With the rising standards of living, more and more people could take to non-vegetarian food in a larger measure. This is likely to increase the demand for animal food which is mostly met by coarse grains at present. If coarse grains are unable to meet this requirement, then, low quality wheat could serve as a substitute for coarse grains.

(i) Against this background, the picture of world grain trade as could be forecast is that while the import requirements of bigger countries in the developing world like China and India, is expected to come down, ~~and~~ the requirements of the South Asian Region is not expected to go up significantly. However, the lower requirement of the



countries like India and China and the South Asia Region is broadly expected to be offset by the increased requirements of the African countries and as a result of this, the level of world grain trade is expected to remain more or less at present level, barring extraordinarily bad years when the requirements of countries like China and India may go up. These countries' requirements being large, once they decide to import, the tonnages involved will be fairly substantial.

(j) The position stated above is with reference to the developing countries. It does not take into account the increase or decrease in international grain trade which may be occasioned by the changing position in the developed countries. Concretely, the changing requirements of U S S R with particular reference to wheat and coarse grains could make a significant impact on the international grain trade market. This has not been taken into account as this paper essentially deals with the food needs in the developing world.

#### CONCLUSION

Before concluding, I must condition my above analysis with the fact that any projections that we make of the economic behaviour may not conform to forecast. All we know about the future is from what we have observed in the past. We know that the future will be similar to the past because in the past, future had been similar to the past. We may, therefore, be cautiously optimistic about the continued improvement of food consumption and food output throughout the world though there is no room for complacency.



## SECOND SYMPOSIUM PANEL:

THE PERSPECTIVE OF THE DEVELOPING EXPORTER  
BY MR. J. CORT

Mr. Chairman: Firstly, I would like to express my deep gratitude to the authorities of the Government of Canada, who have organised this outstanding event in order to celebrate the International Wheat Council's One Hundredth Session, for inviting me to take part in the speakers' panel and in the debate that will surely arise.

Undoubtedly, the subject is exciting and a real challenge for all those who participate in the Symposium, trying to find solutions to the achievement of the always-yearned-for world food security which will therefore, bring humanity greater welfare.

The institution I preside over, the Buenos Aires Grain Exchange, one of the first of this sort in the world - whose 130th. anniversary we have just celebrated - is a non-profit institution whose aim is to promote agricultural production, to provide facilities so that the different sectors involved in grain marketing can carry out their operations under legal and safe conditions and to promote the creation or adherence of institutions representing the different sectors involved in the agricultural activity. For more than 80 years it has been composed of a Grain Arbitration Chamber, which determines daily prices, carries out grain analysis, studies the products and by-products derived from their primary manufacture and acts in the capacity of an arbitrator in cases of lawsuits raised as the result of the fulfilment of the purchase and sale contracts. In the operational hall transactions are being held with available merchandise and a Futures Market fulfills its activities, where deferred date and hedging operations are carried out. Among the numerous institutions representing all the grain sectors that are part of the Exchange I could mention producers, seed breeders, the Fertilizers Chamber, the agricultural extension groups, cooperative companies, storers, sales agents, miller and oil manufacturers and the exporters. As an Argentine and president of this institution, and as one of its members for more than 40 years, I feel honoured to be able to participate and take the floor in this momentous symposium, attended by qualified representatives of importing and exporting countries and of different international organizations.

Up to the present there have been numerous and lengthy negotiations aimed at improving the conditions prevailing in grain production and trade - specially during the last fifteen years -, and their results have been almost negative for developing countries, even for those typically exporting countries like Argentina. It is true that certain progress has been reached regarding the commitments made in the Food Aid Convention and as to the production programmes set up in countries with scarce development, but the purposes of satisfying the food security that the world population requires are far from having been reached.

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



In order to achieve this goal, I consider that world community must share a sincere feeling of cooperation, mentioned on many occasions but reluctantly offered when the moment comes to put it into practice, and it will be necessary to apply humanitarian and economic principles in trade and production, setting aside possible advantages of a typical political nature. Moreover, this is a responsibility that should be taken on by every country and not exclusively by exporting ones.

Since 1873 Argentina has been exporting grain regularly, in increasing quantities up to the end of the forties. From that moment on, its productions have been erratic, on certain occasions due to weather conditions but also because of a lack of incentives to produce. As an example, it would be appropriate to mention that during the last 20 years grain exports have been subject to the payment of export duties having a negative effect on the prices the producer receives. Given its low production costs, competition in the foreign markets has been achieved due to very competitive prices, specially when the exportable surpluses are greater, considering that the country's economic situation does not allow it to grant subsidies or to guarantee export credits. Even though a competition based on lower prices could be deemed inadequate for an exporting country, on certain occasions circumstances may force a country to adopt this strategy, for instance, when the resources necessary to keep a stock are scarce and the country depends, to a large extent, on currencies supplied by its exports. This is Argentina's case, where agricultural exports represent about 55% of its foreign commercial income and at present, this income is extremely necessary to be able to service the country's foreign debt.

Grain production, in Argentina, has recovered during the last years, mainly due to the use of seeds and crop practices that have permitted higher yield, although the sown area has not increased greatly. In 1983 production reached 40.5 million tons and for the current year, a similar figure is foreseen; such volume has allowed us to export the record figure of 23.7 million tons of grain during the year; this amount would reach 28 million if vegetable oils and milling and oil by-products are included.

If we bear in mind the increases that have taken place during the last 15 years, and we take as reference the average corresponding to the following agricultural three-year periods 1966/67-1968/69 and 1981/82-1983/84, it can be observed that Argentina's production of wheat increased 85%, corn 27% and sorghum 422%, and in the case of soybean - of recent development - the increases have been really surprising (18.163%), this year's production being estimated at about 6 million tons.

My country has excellent conditions to produce and the above-mentioned increases have primarily been achieved due to the use of better seeds, since grain sowing is still carried out through methods of extensive nature, and irrigation and fertilizing are rarely used. As regards seeds, it is important to point out that during the last years, 44% of certified seeds have been used for the wheat crop and as far as corn, sorghum and soybean are concerned, 100% of the seeds have been of the controlled and hybrid type.



Therefore, it is quite easy to visualize Argentina's production potential and its remarkable competitive price possibilities in the market if we consider that the above-mentioned increases have taken place without special incentives for producers. On the contrary, and even today, wheat is subject to an 18% export duty and the remaining grain to a 25%. Besides, and in that sense, it should be taken into account that, according to the technicians' opinions, the genetic possibilities of increasing yield per hectare have not been exhausted. On the other hand, it is possible to extend the area and there are excellent prospects to increase the use of fertilizers, whose practice is, in Argentina and as regards grain, in its first stage.

I wish to take advantage of this opportunity to point out that the Government resulting from the elections held on October 30th, 1983, being aware that the country's economic recovery depends to a large extent, on the exports of agricultural products, has recently committed itself to giving its most sincere support to agricultural producers when it expressed that "the Government will no longer turn its back on farming". On that opportunity important measures were announced and some of them are, at present, being enforced.

Among them, I could mention the announcement of a support price for wheat in the next season, which will be adjusted at the moment of the grain's harvest due to the special inflationary conditions prevailing in our economy; the elimination of an import tax that was applied to certain fertilizers and the VAT (Value Added Tax) reduction from 18% to 5% accrued by said products; it was also said that no producer will stop sowing due to the lack of appropriate credits. Likewise, it should also be noted that the same reduction in the VAT was adopted as regards herbicides. At the same time, the Agriculture and Livestock Secretariat has set up a Fertilizers Subprogramme devoted to increasing productivity, which basically consists of supplying the producer in certain areas of the provinces, with urea imported by the National Grain Board, and the farmer who joins the programme must return 2,6 kgs. of wheat for every kg. of urea on the basis of a distance to port of 400 km. or 2,45 kgs, if this distance is 200 km.

Besides the new load plants built by private companies on the Paraná River, which significantly increased the area's shipment capacity, there are new transfer facilities in the Río de La Plata, allowing to complete the vessels' load up to 40 feet draught, therefore benefitting the country and the importer. But regarding the subject of storage, handling and shipment, the last stages have been arrived at in the dealings with the World Bank, with a view to building 22 storage plants in the North of the country (an area which has shown significant expansion in the crops' field), to improving railway transport and its accesses to port and to remodelling the Bahía Blanca Port. This work could be started at the begining of 1985 according to recent announcements, and is of singular importance since it would allow the export of about 17 million tons through this port only, a really significant volume if it is compared with the record amount of 6 million tons exported last year.

The increases registered in production and exports of grain in Argentina and the measures taken by the new government allow us to trust that the challenge for the year 2000 will be successfully met by Argentina as an exporting country, in the corresponding proportion.



A recent survey carried out by the International Wheat Council Secretariat on the prospects for grain in the long term, grants the subject many interesting viewpoints, which, as the Executive Secretary of this institution states, should be taken as possibilities and not forecasts.

According to the above-mentioned survey, the world population would amount to 6.1 billion inhabitants by the end of the century, and the annual demographic growth rate would decrease 0.3% during the 1960/1980 and 1980/2000 periods, although less developed countries will not undergo significant differences. It has been estimated that world annual grain consumption will increase to 2.18 billion tons, a figure showing a far slower increase than that recorded during the last twenty years. As to world trade, the growth prospects can be considered far lower than those observed for the 1960/1980 period. The figure of 265 million tons foreseen for the end of the century, represents a 27% increase compared to the 180% increase recorded between 1960 and 1980. In addition, it is also timely to point out that despite a very small decrease regarding the 1960/1980 period, the annual increase rate of overall production in less developed countries still exceeds the demographic increase rate.

As I stated previously, Argentina can trust it will adequately meet the challenge of supply for the year 2000 in the corresponding proportions, and not wanting to become a spokesman of exporting countries, I believe the same applies to the entire group.

This subject mainly affects importing developing countries and amongst them, particularly those with lower resources, but the solution to the problems they have to cope with is shared responsibility of the world community, whose aim should be to help find the means leading to an adequate answer.

With this in mind, I would like to suggest some points that must be considered in order to improve international food security. Although some of them are not new, I will mention them for I consider that what has been done up to the present could be extended and analized in depth.

1. The lack of resources is one of the main subjects preventing many countries from covering their food deficits. The Food Aid Programmes have only slightly met some of the needy countries' requirements, and besides bilateral loans and donations, we must insist on an increase of the international financial fund's resources which will allow the recipient country to purchase from any exporting country, under better price and freight conditions.

2. When circumstances so require it, the infrastructure of ports should be improved, as should the handling and domestic transport of importing countries receiving this aid, in order to decrease the costs of the product to be delivered to their population. In this aspect, it will also be necessary to receive financial aid to make the corresponding investments.



3. In less developed countries there are certain areas which could be devoted to crops, bearing in mind the progress achieved with seeds, fertilizers and irrigation. Twenty years ago, I remember having been told that when the Wheat Agreement renewal was being discussed, the Chief Commissioner of the Canadian Wheat Board said that he would not be surprised if in the near future, wheat could be sown in the Mont Blanc, thanks to the great technical developments achieved in the field of genetics. And following this same line, I can mention that in Argentina with the help of these developments, wheat, corn, sorghum and sunflower are being sown in areas which, 15 years ago, were considered inadequate for said crops.

4. A thorough advisory scheme should be prepared in order to inform agriculturists about the appropriate handling of soils, including problems arising from erosion, either wind or water. The loss of fertility owing to bad soil handling, causes discouragement and often leads the farmer to put that crop aside.

Recently, a national conference was held in the Buenos Aires Grain Exchange, to deal with these subjects. The organizing institutions have requested the FAO to consider holding similar regional meetings, and have also stated they would submit to this organization the subjects dealt with and conclusions reached during the above-mentioned meeting.

5. Consideration should be given to the fact that Food Security could be helped by strengthening the development of non-grain crops and of other sources of food production, such as edible tubercle or fishing.

6. The supply of raw materials and/or food should be fostered through the so-called compensated exchange which does not require or at least decreases the use of currency. An adequate example is the recent decision made by the Latinamerican Integration Association (A.L.A.D.I.), when fostering this type of transaction among the countries of the Latinamerican area.

7. The World Community and above all, developed countries, should understand that the welfare of developing countries, whether grain exporters or importers, will be achieved sooner by helping the latter to market their products, instead of hindering them through the use of measures showing an exaggerated protectionist view.

To sum up, Mr. Chairman, I reiterate my gratitude for being able to be amongst you, this having given me the occasion to say something of what we can jointly do, as regards world food security requirements.

I only need to add my fervent desire that the analysis of specific possibilities, will tend to respond to the legitimate right of participation that in fairness corresponds to all nations. This not being a mere pattern of beneficency or subsidies, nor even less of shaping a framework of interested assistance, but of the fulfillment of the moral duty to contribute to the creation of conditions, so that each national community may achieve per se its own development.



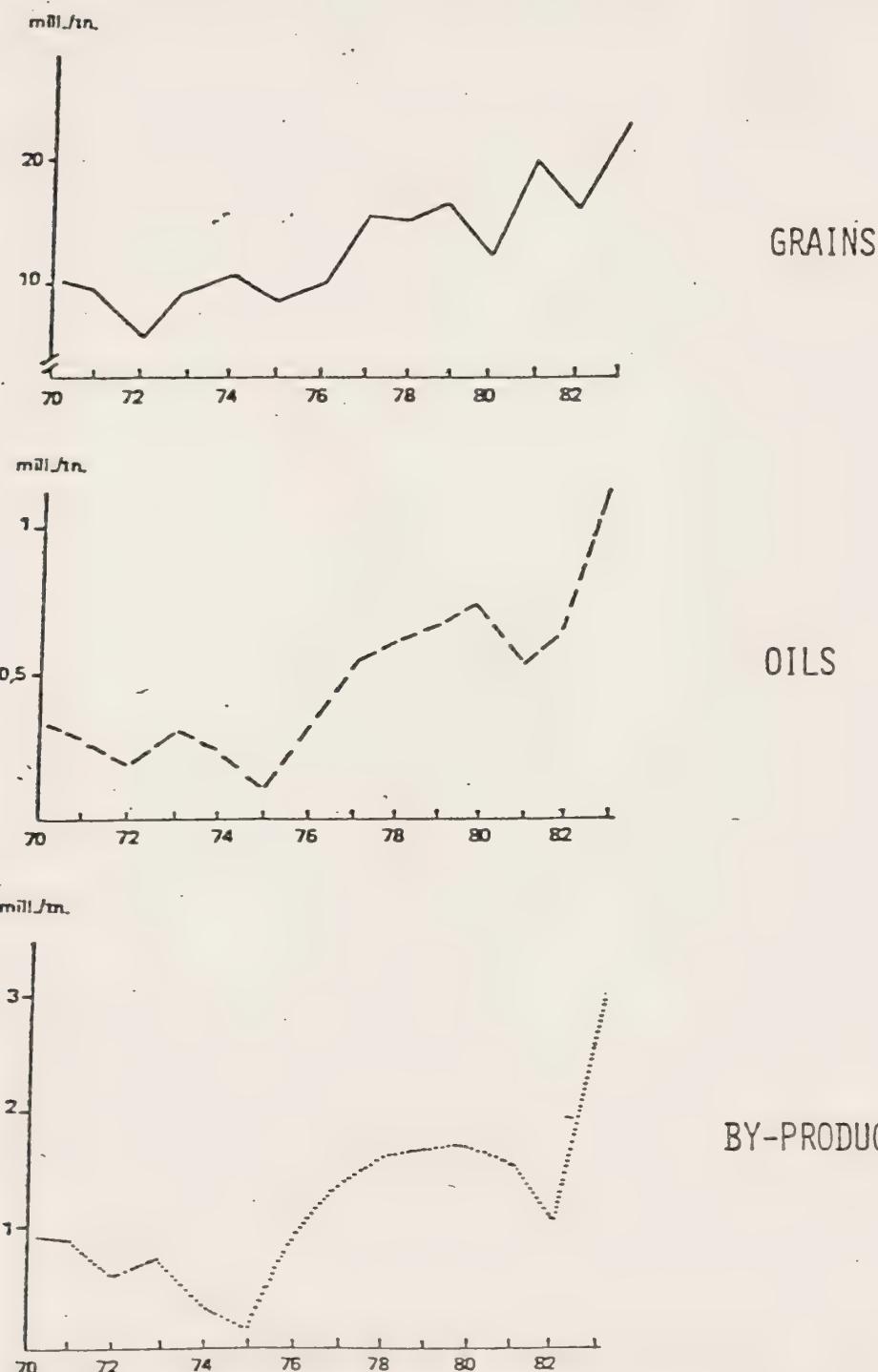
The assistance decisions must be a consequence of the assurance that developing countries require justice more than the granting of benefits; free access to markets more than unrewarding concessions; science and technology contributions prior to protection.

Because it is unjust to destroy richness or not to produce it, so as to maintain situations of prosperity and even more so to cast aside solidarity. Preservation of world peace urges, every time more so, to put development at the service of man, of all men, so that cooperation be a means not only to give, but also of being ready to receive.

God's mandate to dominate the earth and to put it at man's service is always enforced. It behoves us to assume the responsibility of carrying it out.



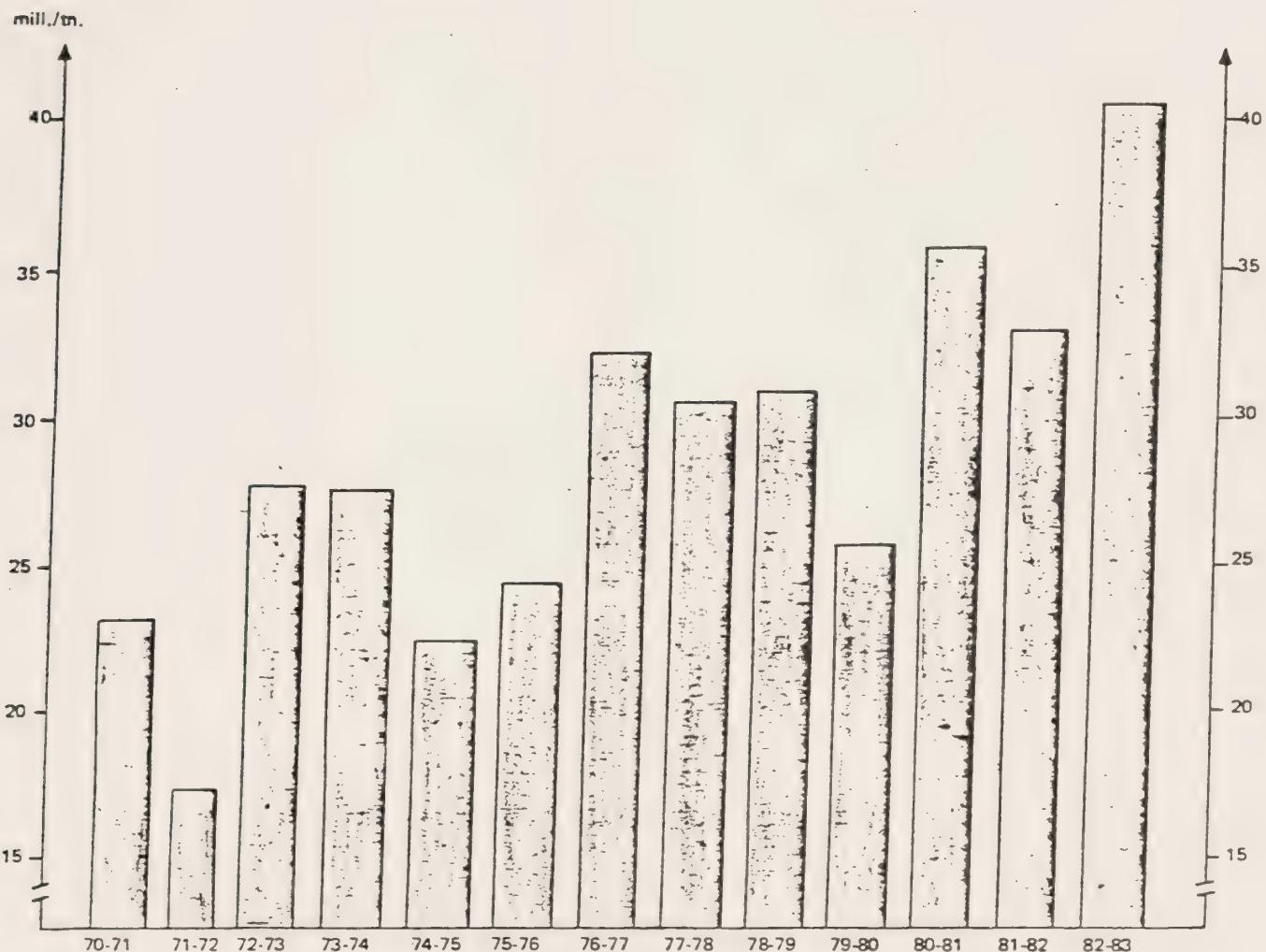
## EVOLUTION OF ARGENTINE EXPORTS OF GRAIN, OILS AND BY-PRODUCTS



SOURCE: PREPARED BY THE BUENOS AIRES GRAIN EXCHANGE BASED ON DATA SUPPLIED BY THE INDEC (NATIONAL STATISTICS AND CENSUS INSTITUTE) AND BY THE NATIONAL GRAIN BOARD, (ARGENTINA)



EVOLUTION OF THE ARGENTINE GRAIN PRODUCTION  
(1970/71-1982/83 PERIODS)



SOURCE: PREPARED BY THE BUENOS AIRES GRAIN EXCHANGE BASED ON DATA  
SUPPLIED BY THE AGRICULTURE AND LIVESTOCK SECRETARIAT,  
(ARGENTINA)



# THE CENTENNIAL FORUM 100 LE FORUM DU CENTENAIRE



## FUTURE DIRECTIONS FOR POLICY

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The Centennial Forum of the International Wheat Council  
Ottawa, Canada  
June 29, 1984

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



## FUTURE DIRECTIONS FOR POLICY

Emery N. Castle

No one can predict the future, and that probably goes double for future policies. Everyone would admit the truth of that simple statement--that we cannot know the unknowable--yet political advisors from Merlin to court astrologers to today's pollsters and computer-aided analysts have tried to forecast the shape of things to come. That they frequently are proven wrong does not seem to shake their faith or do much harm to their credibility: the rest of us apparently are so eager to know what's going to happen tomorrow or next year or by the year 2000 that we are willing to suspend disbelief before the fact and to forgive the errors after the fact.

Indeed, as Winston Churchill pointed out, "Political ability is the ability to foretell what is going to happen tomorrow, next week, next month and next year. And to have the ability afterward to explain why it didn't happen."

Nevertheless, I am not going to try to fool you with forecasts, to persuade you that I have an infallible crystal ball that permits me to see around the bend of tomorrow. There is no shortage of forecasts of the future; the woods are full of them. The trouble is, no one knows which forecasts are correct. More forecasts are not needed, but, if someone could offer a method for selecting the best forecast, the market would be very great indeed. Thus, I am not going to discuss future policies but rather future directions for policy, which are quite different. That is, while no one can know with any degree of precision what responses will be



made to future events, we can identify a few present trends that are broad and deep enough to affect those responses and even the events themselves.

For our purposes, the trends I think are most important are three that are drawing nations together in a web of mutual dependence. The first of these is economic. This needs no elaboration: that you are meeting this week in your Centennial Forum is proof enough that nations long have recognized the advantages to be gained through international trade.

The second trend is political. I realize that some may question an assertion of political interdependence at a time when the Cold War seems revived, savage wars and insurrections mark the globe, and international organizations appear powerless to moderate conflicts or even halt the carnage. Obviously, we could hope for far more pacific times. But my point here is simple, even stark: that is, nuclear means of destruction create political interdependence. No one may like living beneath a nuclear sword of Damocles, but the fact that we do forges in each superpower an unbreakable link to the other.

The third trend stems from the unequal distribution of natural resources around the world and the fact that we all share in common the life-supporting services of the global environment. Natural resources and threats to environmental quality make us interdependent in a physical and geographic sense as well.

My thesis is that the future directions of policy will be conditioned in a broad and general way by these interdependencies--economic, political, and environmental. But, while each nation must deal with the same trends, each can be expected to approach them in the context of what they see as their own self-interest. This perceived self-interest must be recognized if we are to be realistic as we appraise the policy environment. Thus, we



may agree with some self-interested policies and think them positive influences on world order. And we may see other perceptions as leading to counterproductive policies that must be changed if conditions are to improve. But no matter: regardless of what we think, or of how nations interpret their self-interest, perceptions in these cases are reality and must be taken into account accordingly. In a sense, then, my remarks deal with how the realities of economic, political, and physical interdependency get translated into national policies.

#### Food and Agricultural Policies

National food and agricultural policies are so many and varied that they seem almost to defy description. Yet, they do reveal general tendencies and particular patterns. Perhaps key among them is that an efficient agriculture, or access to an efficient agriculture, is a precondition for economic development. Thus, a genuine basis exists for the attention that is given by development agencies and by the countries themselves to agriculture in the developing world. But there is far from consensus about how to bring about a more efficient agriculture there, as witnessed by the highly varied policies that are pursued. However, three things seem clear from experience:

1. Those who live on the land, and whose principal occupation is the production of food, will respond to economic incentives: again and again producers have reacted in dramatic ways to favorable price relationships. Despite this evidence--indeed, flying in the face of it--many nations shackle their food production systems with so-called "cheap food" policies that do not provide adequate



incentives for producers (Schultz, 1978). In the long run, cheap food for consumers, when transferred back to the farm, often becomes expensive food.

2. Investing in improving the means of agricultural production typically yields handsome returns. That investment in agricultural research and education has grown rapidly indicates that this relationship has become widely recognized and accepted.

3. International trade is a way to gain access to more efficient agriculture than can be developed domestically. On an aggregate basis, trade does not account for a large percentage of world food needs, even though neither logic nor experience argues that a nation should be self-sufficient in food production. Even nations that have relied heavily on food trade, such as Great Britain and Japan, often still worry about food security and may pursue policies toward food independence.

As development occurs, a nation frequently develops an advantage in particular commodities. Whether a nation, on balance, is a net importer or a net exporter of food probably should be a consequence of development policy rather than its objective.

To summarize this section, we may say that a developing country is well advised to improve the efficiency of its agriculture by social investment in the techniques of production and in people engaged in agriculture. Further, producers will respond to favorable price relationships: cheap food policies that do not recognize this will be



counterproductive. Finally, international trade policies that focus on such issues as the balance of payments to the exclusion of providing access to efficient agricultural production may well inhibit economic development.

The fact that the developing countries typically are plagued with food and agricultural problems does not by any means imply that the industrialized countries have no such problems. Indeed, few, if any, of the more developed countries seem to be happy with their agricultural policies. For example, a good many of the more-or-less market-oriented economies provide substantial protection for their agriculture, which often has the effect of creating the potential for excess production. Protection causes problems whether the commodity in question is one that must be guarded from competition or one the country wishes to trade internationally. It is difficult to increase domestic prices above market clearing levels without creating incentives that eventually benefit producers in other countries--the U.S. Payment-in-Kind program provides an outstanding example.

The centrally planned economies have their problems as well, and both the Soviet Union and the Peoples Republic of China have experimented with different ways to increase agricultural production. Despite heavy investment in agriculture in the Soviet Union, efficiency of their agriculture is significantly lower than that of other developed but less rigidly planned economies.

#### Natural Resource Adequacy

I now turn to the kind of interdependence created by the fact that all nations share a common natural environment. Do we need be concerned about the adequacy of natural resources? To what extent should national policies be influenced by apparently growing shortages of natural resources and



declining environmental quality? These are not phoney issues--there is a genuine basis for concern about them--but it often seems to be focused on the wrong problems. Permit me to be more specific.

What are the right problems? In my mind, some important global environmental problems rank first. Acid rain, carbon dioxide build-up, and the loss of species and basic genetic material provide examples. There is a stirring of concern about these matters in the developing countries as well as among some of the more developed nations, centrally planned, and market-oriented alike, but the basic stance so far has been official neglect. A common concern for these problems offers a base for communication and cooperation, and at some point it may become apparent to all the actors that international cooperation--not competition--is the proper avenue to address such issues.

Closely following in importance are some major problems of regional and local natural resource adequacy. For example, some areas now in food production and others being brought into production are incapable of sustaining present levels of use. Typically, access to these lands either is open or partly controlled. Such conditions usually arise because of human misery resulting from excess population relative to the natural resources available. Conditions may get worse unless national policies are improved and property right reform occurs because, when poverty and hunger are widespread, resource conservation has a low priority. Thus, the solution to resource abuse usually will be forthcoming only after poverty and hunger have been addressed.

Now, what are the wrong problems? I do not intend an exhaustive list here, but the kind of thing I have in mind are worries about the global adequacy of arable land and water for agricultural production. It is



important that such questions be raised, discussed, and investigated, but at least some of this anxiety is misplaced. A lot of land is capable of being used more intensively, for example, and water is abundant, though it is poorly distributed in time and space. The crucial issue is not the availability of these resources in a physical sense. Rather, it is the creation of the proper incentives for their use (Farrell, et al, 1984).

#### Reconciling Domestic Policies and Global Interdependence

Successful management of the three interdependencies--economic, political (nuclear), and environmental--could pay an enormous premium to humankind. In fact, the premium may be greater than at any other time in history. Despite this opportunity, the self-interest of nations often results in perceptions--and policies based on those perceptions--that in the long run become counterproductive. The final section of these remarks is based on the assumption that some national leaders recognize that true self-interest will be served only if the global interdependencies are managed successfully.

Let me advance four propositions as a basis for a public policy that will deal simultaneously with national self-interest and global interdependence--a public policy that is both realistic and idealistic.

1. Attempting to control trade in natural resource commodities, either through a cartel arrangement or unilateral action, may convey international political power but, if so, it is a power that is transitory at best (Castle and Price, 1983).

Take the most famous case since the Second World War--the oil embargo imposed by the Organization of Petroleum Exporting Countries. This event had an enormous effect on



the economies of the entire world and international relations were affected accordingly. But, as great as the disruption was, world production and consumption eventually adjusted: the economic and political advantages conferred on the exporting countries were neither absolute nor permanent. The power the cartel once enjoyed has been lost, and it is doubtful that it can be regained.

Similarly, the countries that export nonfuel minerals seem to be aware of their limited economic and political power, if only because the possibilities for substituting, recycling, and stockpiling materials are so substantial. But perhaps of even greater importance is the realization that a market lost may never be regained or, if it is, only over much time and after considerable economic loss. Perhaps this is why there has been so much talk about "resource wars" but, thankfully, so little substance.

Grain, of course, has been employed as a tool of foreign policy, especially by the United States, but even a sympathetic evaluation of that experience would give it a barely passing grade. The reason is that many nations aspire to export grain and, while some are more efficient than others, the advantage they enjoy is not great. When a supply interruption occurs from any one nation, many others can fill the gap. And again, a market can be quickly lost and regained only with difficulty, if at all.

2. Economic self-sufficiency in food production is a luxury many developing nations can ill afford. Likewise, many



industrialized countries are discovering that protecting their agriculture from international markets is exceedingly expensive.

The major point here is that domestic policies that attempt to establish food self-sufficiency and discourage trade tend to weaken a nation's capacity to feed its people. Nations cannot make policy in a vacuum: if international trade is to play its potential role in supplying food, the effect of domestic policies on international markets needs to be taken into consideration. One of the major reasons international markets are so unstable is that many nations use them to bring domestic policies into a kind of balance or equilibrium. Thus, domestic instability often has been exported, with its costs borne by all who participate in international markets.

3. In the coming years, increasing pressure will be exerted on common property, or open access, resources.

For reasons of law, tradition, policy, or because of technical obstacles, it may be impossible to assign private property rights to some natural and environmental resources, or even to develop appropriate management devices for them. For example, it is very difficult to assign enforceable property rights to the use of the environment's capacity to assimilate pollutants. These services, therefore, cannot be exchanged freely in the marketplace and their allocation becomes a collective responsibility when overuse creates pollution or congestion. There are exceptions, of course,



such as the recent development of institutional devices to permit the sale of pollution rights.

Similarly, the effects of pollution are visited on entire populations and the benefits of pollution control are available to everyone.

Especially difficult questions of public policy are inherent in the nature of public goods and open access resources. Compromises, or tradeoffs, must be made between levels of environmental quality and the provision of other goods and services, and between efficiency and equity. Moreover, the process by which decisions are made can mean as much or more as their outcomes--that is, have decisions been made fairly? And, as important, are they perceived to have been made fairly?

This complex of questions is the essence of the public policy issue involving the allocation of environmental resources. We all know how difficult these questions are within a country, but what we now need is international cooperation--on the oceans, the atmosphere, and the noncommercial plant and animal species (Castle, 1982).

4. Increased interdependence--of all kinds--raises the price of hostility and is a force for peace.

How can such a proposition be translated into proposals that might be attractive to those who formulate domestic policies? We tend to fear depending on others, but when mutual dependence exists, we have an attractive incentive for accomodation. Furthermore, the more complex the trading



pattern among nations, the less likely it is to be disturbed by unilateral action or the actions of a small group. It seems to me, therefore, that it is in the enlightened self-interest of those nations with higher per capita incomes to help developing nations achieve their aspirations. This may result in greater competition in some arenas, but global demand for all goods and services can be expected to increase. It is true that this scenario probably means even more intense pressures on global environmental resources, but I nonetheless favor greater economic development because it is the only means I see whereby the masses of the earth can improve their welfare.

#### Summary and Conclusion

My sense of the future direction of policy, then, is that we must find ways of overcoming the poverty and hunger and poor management of natural resources that still plague too many parts of the world. And in this quest no means are likely to be more effective than those that strengthen economic interdependence through international trade. The obverse is that national policies that discourage trade should be abandoned.

Increased trade and economic development--at least as we have known it--may worsen global environmental problems, but the climate of peace and international stability that trade and greater prosperity create is much more favorable for solving these problems than is the current condition of tension and hostility. Food, after all, is the number one priority for hungry people, with all other goals relegated to a distant second or worse



position. As Albert Einstein put it, "An empty stomach is not a good political advisor."

Finally, given a fair share of wisdom and good luck, we can look forward to achieving all the goals I have mentioned: we can increase international trade in food and fiber, we can move toward the elimination of poverty, we can make the world a safer and more stable place, we can fill scores of millions of empty stomachs. We can do these things because, on a global basis, we have sufficient natural resources and human knowledge to produce much more food in the future than we do now. Indeed, the world has the potential to feed a growing population of 6.1 billion people moderately better by the year 2000 than it fed 4.3 billion in 1980 (Farrell, et al, 1984). It is up to all of us to realize that potential.

Thank you very much for your attention.



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THE CENTENNIAL FORUM  LE FORUM DU CENTENAIRETHREE POLICY-DRIVEN TRENDS FOR GRAINS

The organizers of this symposium are to be congratulated for a timely and informative program, and I am pleased to be able to participate.

You have heard from others at this symposium about various factors that will affect the long-term outlook for world grain trade. My remarks focus on three trends in the world grain economy that will continue to influence farm structure and production patterns. Each is driven to a large extent by policy considerations. Two of them relate specifically to wheat and one to grains in general.

Producing Wheat for Yield, Not Protein Content

There has been a pronounced trend in some countries, especially the United States but others as well, for farmers to emphasize increases in wheat yields at the expense of protein content. There were several reasons for this development.

One was a change in bread baking technology that reduced the required protein content in flour. The use of this technology is now fairly widespread.

Second, the rapid growth in world wheat trade during the past decade or so has been with the developing countries, China, and the Soviet Union, markets that generally do not demand high-protein wheat. Exporters responded by increasing production of those classes of wheat and protein content desired in the rapidly growing import markets.

Finally, grain price support policies have provided producers with additional incentives to increase yields and production, even at the expense of protein content, in a number of countries and especially in the U.S. and E.C. These policies do not generally differentiate very much among classes of wheat or by protein content. Since the policy benefits are directly proportional to the volume of production, farmers have had additional encouragement to increase yields. Scientists have responded by developing higher yielding varieties to meet farmers' needs.

I do not see a reversal in the first two trends during the rest of this century. And even if grain price policies in future years offer less incentives to increase output, it is doubtful that farmers will revert to providing higher protein content wheat at the expense of yield. The demand for protein is no longer strong enough to force producers to do so.

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Paper by Martin E. Abel, President, Abel, Daft & Earley, 1339 Wisconsin Avenue, N.W., Washington, D.C. 20007 at The Centennial Forum, A Symposium to Celebrate the 100th Session of the International Wheat Council, Ottawa, Canada, June 28-29, 1984.



Some areas of the world will continue to produce high-protein spring wheats for climatic reasons: Canada and the Northern Plains of the United States, for example. Supplies of these wheats should remain adequate to meet future demand. These wheats can be blended with lower-protein wheats to achieve the desired product. For example, U.S. flour millers were able to cope with a low-protein 1983 winter wheat crop without bidding up winter wheat protein premiums very much by blending 60 - 70 percent winter wheat with 30 - 40 percent hard spring wheat.

#### Pricing Wheat as a Feed Grain

The world feeds livestock a considerable amount of wheat each year. The Soviet Union routinely feeds a third or more of the 80-100 mmt of wheat it produces. And in some years, such as the 1983-84 crop season when feed grain supplies were reduced sharply and wheat supplies were large, world wheat feeding reaches very high levels. In the U.S. alone, wheat feeding is estimated to have reached 12.6 mmt in the 1983-84 season, 92 percent above the previous year and representing 16 percent of total use.

In many parts of the world, both wheat and coarse grains can and are grown on the same land. Acreages of wheat and coarse grains respond to relative prices of the two types of grain. Supporting wheat prices too high relative to coarse grains encourages overproduction of wheat and inefficient resource allocation.

Over the past 30 years the United States has gone through a complete cycle with respect to the support price (loan rate) for wheat relative to corn, the principal feed grain, on a bushel basis. In the 1955 - 63 period, the wheat support price averaged 52 percent above that for corn. During the 1964 - 79 period, U.S. grains policy and supply-demand conditions moved the U.S. in a more market-oriented, competitive-pricing direction and the wheat support level averaged only 20 percent above that for corn. The U.S. reverted back to its older policies in the 1980-84 period with the wheat support being 34 percent above the corn support price. These recent changes in relative support prices undoubtedly contributed to a growing wheat surplus in the U.S., although other forces were also at work.

The combination of wheat surpluses and the high cost of government programs when the wheat price support level gets out of line with that for coarse grains will force countries to adjust relative support levels. A start was made in the U.S. with the 1984 crops. Similar developments have taken place over the last decade or so in the E.C. where wheat support prices have come more in line with barley and corn prices on a relative feeding value basis.

If I am correct in my conjecture, one can look forward to wheat prices reflecting feeding values in most years of abundant wheat supplies or when coarse grain supplies are extremely tight. Only in years of poor wheat crops and small supplies relative to demand will wheat prices rise sharply relative to coarse grains.



### Adjusting Grain Prices Worldwide

The final topic I want to discuss is the possibility of a realignment of grain prices among countries. These adjustments will be stimulated by world economic and financial forces and lead to reductions in grain price support levels (certainly in real terms and possibly in nominal terms) in some major exporting countries such as the United States and the E.C., and increases in consumer grain prices and possibly producer prices as well in a number of developing and some centrally planned countries.

In a few major exporting countries, the key driving forces toward lower support levels are:

- Sharply lower expectations for growth in the world economy and in world grain trade over the next few years, at least until and possibly into the 1990's;
- Continued increases in grain production capacity in many major exporting countries as a result of higher yields; and
- The cost of grain surpluses to governments, which is forcing a serious re-examination of price support levels, a process that is already underway in the U.S. and the E.C.

Many developing countries will have to adjust grain prices as well, raising consumer prices and, in some instances, producer prices. These countries have subsidized consumer grain prices and usually depressed producer prices in the process. Their policies have thereby discouraged production and encouraged grain consumption and imports.

The financial difficulties facing many developing nations are forcing a re-evaluation of their food and agricultural policies. Money to finance food imports is scarce. Austerity programs imposed by the IMF and other lenders are designed to reduce domestic consumption and imports and to encourage domestic production. While it will be politically painful, many of these countries will have little choice but to reduce or eliminate food subsidies, and a start has already been made in several countries.

As a consequence, I see a general tendency for developing countries to increase consumer and producer grain prices relative to world market levels. Similar developments have already occurred in some centrally planned countries, and further increases cannot be ruled out.

If these adjustments continue and gain momentum, as I think they will, they will probably have a significant influence on world grain trade levels. The pricing changes that are being forced in developing countries should, on average, stimulate domestic grain production, and restrain the rate of growth in consumption and imports. In the case of exporting countries, lower real and possibly nominal support levels could reduce the rate of growth in grain output. Farmers will have less incentive to bring more land into grain production, and



the rate of growth in yields may slow because per acre use of fertilizers and chemicals would probably decline in response to lower prices. I cannot, however, visualize at this time an actual decline in yields in developed countries, years of poor weather aside; it would take a very sharp decline in grain prices to reduce yields.

The total effect of these various price adjustments will be to slow the rate of growth in world grain trade. The growth that does occur will take place in a world economy that better reflects the principle of comparative advantage than that which has existed for many years.

I do not, however, want to sound overly optimistic about the extent to which increased competition enters the world economy. All I am saying is that there is a good chance the world grain economy will become a little less distorted and a little more competitive. But there will still be an ample measure of market distortions resulting from government policies in developed, centrally planned, and developing countries. One will be able to justify some of these distortions in terms of legitimate political and economic reasons, but a great many others will have no "rational" justification at all.

Furthermore, translating higher grain prices into increased production in developing countries is a slow and uncertain process. If one believes that the development of land and water resources and agricultural technologies respond to commodity prices over long periods of time (the induced innovation hypothesis) and if one accepts in my view of adjustments in grain prices among countries, then productivity growth should be faster in developing them in developed countries.

Still, we must recognize that we are dealing with general tendencies that manifest themselves over an extended period of time. Many countries could remain exceptions to the rule for several decades since their agricultural resource bases and research capabilities are currently very underdeveloped and these inadequacies cannot be quickly altered.

#### Implication

If the trends I have outlined continue, they could have a pronounced influence on production, consumption, trade, and price behavior for wheat and coarse grains over the next one or two decades. National and international grain policy will also be affected.

As a result, projecting past trends may be an even less reliable way of looking at the future. It may be time to take a hard and broad analytical look at the world grain economy, one that captures important technological, economic, and policy interrelationships.



THE CENTENNIAL FORUM



LE FORUM DU CENTENAIRE

FUTURE DIRECTIONS FOR POLICY:

A PRODUCER'S PERSPECTIVE

by: E.K. Turner  
President  
Saskatchewan Wheat Pool

The Centennial Forum  
A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
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## FUTURE DIRECTIONS FOR POLICY:

### A PRODUCER'S PERSPECTIVE

It is a privilege to speak to this symposium commemorating the 100th session of the International Wheat Council. In addition, I welcome the opportunity to present a producer's perspective on future directions in economic and grain related policies.

The producer's perspective I would like to share with you is not an individual view, but a collective one, a perspective with long-standing historical roots which are the foundation of Saskatchewan Wheat Pool, the organization I represent, and that of the sister Pools -- Alberta Wheat Pool and Manitoba Pool Elevators. The perspective is that there is advantage and strength in co-operative effort, be it at the producer level, the exporter level or any other level you care to apply it to. Saskatchewan Wheat Pool applies that concept at the producer level, while the International Wheat Council, to varying degrees, practices that concept between importers and exporters.

This symposium commemorates the 100th session of the International Wheat Council. In Saskatchewan we are



celebrating a different anniversary, that being the 60th year of existence of Saskatchewan Wheat Pool. We are marking that anniversary with great pride. For us it is not solely the celebration of one organization's progress, but the perseverance of a concept, that producers, through collective action, can shape their environment and have some influence on their fortunes.

A review of the early years of the Canadian grain industry shows that our settlers had to contend with a multitude of unfavourable forces affecting the handling, marketing and movement of their grain. They had to endure injustices in the weighing, grading and acceptance of their production, the monopoly powers of railways, and the variabilities of a speculative exchange which priced their grain and determined their income.

Individually the grain producer was powerless to address these wrongs. It was only through co-operative effort that producers gained influence over the handling, shipping and marketing of their grain.

Through that realization in the mid 1920's came the birth of the three prairie wheat pools. They grew from humble beginnings, and were founded on not much more than producer commitment to deliver grain. They began without facilities, operating expertise or strong financial backing.



Today, the three prairie pools handle almost 65 per cent of western Canadian grain deliveries through an extensive network of country elevator facilities. In addition, the co-operative sector maintains terminal elevators, oilseed crushing plants, fertilizer production facilities and farm supply centres. All this stems directly from the recognition that the more control producers have over the factors that affect their livelihood, the better off they are.

It was the same united action, and appeal on the part of producers which led to the creation of the Canadian Wheat Board in 1935. Through this central marketing agency, prairie producers are assured the best possible returns for their production. The concept works well in Canada, and about 82 per cent of all prairie grain is sold through the Canadian Wheat Board.

United action, co-operative action, has also shaped the Canadian grain industry and the environment of producers in other ways. Directly or indirectly, the action of producers has influenced freight rates, grain handling charges, the rail line network and our regulatory environment and agencies, to name a few examples.

I point to that review as evidence that co-operative action on the part of producers in Canada has worked to



their advantage. I suggest that the times of strong co-operative action on the part of producers internationally have also been of great benefit to them, and for that matter to consumers. We have traditionally maintained that producers and consumers of grain and especially wheat are best served by effective and strong international agreement concerning price, supply and trading conditions.

However, in reviewing history it appears that strong and effective international wheat agreements have not been the norm, despite a great deal of effort on the part of those concerned. As long ago as the late 1920's exporters discussed the establishment of an International Wheat Pool. In 1933 we had the first, though short-lived, international wheat agreement, a response to the request of many concerned organizations and countries for delivery quotas to discourage and regulate over-production. In 1949 we had the first successful international wheat agreement which implemented minimum and maximum wheat prices and importer and exporter quotas. A succession of agreements followed, though so weakened that by 1971 there were no price provisions, and only general pledges on maintaining some concept of orderly marketing. Since then, the international wheat agreements have not contained economic provisions and have had limited impact on the world wheat trade.

And what else has happened since 1971? We have



oscillated between times of massive surplus and times of serious concern for world food supply. We have experienced periods during which prices were bid up beyond levels developing nations could afford to pay, and times of devastating contraction of farm income in exporter countries. We have experienced embargos, dumping of surplus stocks and predatory competitive practices which have disrupted normal trade channels. In short, we have moved to an unstable environment which has frequently been to the detriment of producers, or consumers or both. In all fairness, one has to ask if it would have been possible to design an international wheat agreement that could have withstood the turbulence of the past 13 years?

Could we have designed an agreement that would have accommodated the worldwide economic situation, and the domestic policies of individual countries on agriculture, economic development and trade which frequently tend to conflict at the international level?

We must come to realize that international co-operation on many problems in addition to agricultural problems is necessary if the concerns of farmers are to be met. For example, I find it difficult to believe that some government leaders fully realized the ramifications of some anti-inflationary policies. High interest rates, economic contractions, international monetary instability and



unemployment have had a major impact on agricultural producers. When people are unemployed or their income falls, the consumption of farm products declines. In addition, countries have had their economic output shrink, leaving governments with less revenue and thus less able to fund farm programs. Internationally we have experienced protectionist policies that disrupt trade, along with political rhetoric and threats of economic warfare that are disruptive and create further instability. Given the current state of affairs there is no time like the present to speak in terms of meaningful co-operation at the international level to solve our world economic and agricultural problems.

Two questions immediately come to mind when one speaks of co-operative action. The first is "what do producers expect to, or hope to gain?" The second is, "Why should consumers give support to producers' plight?"

My perspective on future policy directions for agriculture is that of a Canadian wheat producer. However, I'm sure producers in other countries can easily identify themselves with our concerns.

First, producers need remunerative prices. It is obvious that the world's resources of land, of people, materials and knowledge are more than enough to feed the



world community. However, those resources will not be fully utilized and the world will not be adequately fed unless producers in developing and developed countries alike receive remunerative prices. Frequently, producers are victims of domestic cheap food policies, and receive less than adequate compensation for their capital, management and labour. Also, producers are frequently price takers when they sell their production, but must bear the full effects of inflation on the purchase of the necessary production inputs. As well, the output of producers is determined by the variabilities of the weather. That risk factor alone has enough of an impact on farm income without adding to it inadequate prices.

Second, producers need some indication of market size and demand. There is no point in engaging in all-out production if the markets or the effective demand does not exist. The developing countries which are major markets are now facing huge problems with their external debt. High interest rates are affecting not only the servicing of that debt but also the ability of those countries to satisfy domestic food demand with imports. Solution to the debt problem and expansion of effective demand in developing countries are especially fundamental if producers are to utilize their productive capacity effectively.

Third, producers need stability in policies, especially



at the international level. Exporter countries like Canada can become caught in the the conflict between powerful countries which are in disagreement over trade policies and practices.

Fourth, producers need to be relieved of the burden of being responsible for food security, through maintenance of surplus stocks. That security should be at the cost of the governments of the world.

In response to these basic needs of producers what would consumers of importing countries receive in return? They can expect an adequate supply of good quality food. They can expect the supply of that food at a more stable cost and at a cost which relates to general economic trends. And just as importantly, they can expect the right to participate and influence food policy decisions. In addition the world population stands to gain a better degree of food security, one which is not a by-product of periodic surplus accumulation.

Currently, importing countries can look to the short term benefits of a world food surplus, but I ask you, how long will it last? It will take only one year of adverse weather to change that apparent surplus to one of shortage and sharply rising prices. And what would producers gain? A period of short-lived prosperity, lasting only so long as



it takes farmers to over-produce in response to those better prices.

Farmers are not speculators--they are producers. Yet if the world continues to speculate with the needs of consumers and the livelihood of producers, it must expect the cycle of boom and bust and the resulting price and supply instability.

It is through international action on the part of both importers and exporters that we can address national concerns of rural preservation and farm income. We can address the quandry of how to adequately pay producers around the world for their efforts while ensuring the price of food does not rise beyond the means of much of the world's population. We can better address our responsibilities for food aid and development assistance to needy nations, a responsibility that both exporter and wealthy importer nations must share.

In conclusion, we urge that world governments begin the international co-operation and the development of multilateral solutions that will ensure price and income stability for producers and thus ensure security of supply for consumers.



That, then is a producer's perspective for the future. □ □



THE CENTENNIAL FORUM



LE FORUM DU CENTENAIRE

FUTURE DIRECTIONS FOR POLICY:

A DEVELOPING COUNTRY PERSPECTIVE

by                   Ruy N.P. Noqueira  
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THE CENTENNIAL FORUM  
A SYMPOSIUM TO CELEBRATE THE 100th  
SESSION OF THE INTERNATIONAL WHEAT  
COUNCIL  
OTTAWA, ONTARIO

June 29, 1984

A Symposium to Celebrate the 100th Session  
of the International Wheat Council  
June 28 & 29, 1984 Ottawa, Canada

Colloque marquant la 100<sup>e</sup> séance  
du Conseil international du blé  
les 28 et 29 juin 1984 Ottawa, Canada



IT IS WITH GREAT PLEASURE THAT I ADDRESS THIS MEETING IN ORDER TO DISCUSS FUTURE DIRECTIONS FOR POLICY FROM A DEVELOPING COUNTRY PERSPECTIVE.

AS YOU ARE PROBABLY AWARE BRAZIL'S COMMITMENT TO INTERNATIONAL WHEAT TRADE IS A LONG ESTABLISHED FEATURE AND EVEN BEFORE SECOND WORLD WAR BRAZIL RANKED FOURTH AMONG WHEAT IMPORTING NATIONS. SINCE THEN AND DESPITE THE INCREASE OF DOMESTIC PRODUCTION AND THE DRAMATIC CHANGES WHICH HAVE OCCURRED IN THE UNIVERSE OF IMPORTERS, THE INTERNATIONAL WHEAT COUNCIL'S LATEST ESTIMATES PUT BRAZIL AS THE FIFTH LARGEST IMPORTING COUNTRY IN 1983/84.

IN THE MEANW<sup>E</sup>E, THE AGRICULTURAL SECTOR IN BRAZIL HAS SHOWN A STEADY GROWTH AND EVEN IN THE GRAIN SECTOR THE PRODUCTION FIGURES WERE DOUBLED FROM THE 16.8 MILLION TONS AVERAGE IN 1961-1965 TO 33 MILLION IN 1983. IN OTHER AREAS THE INCREASE WAS MUCH MORE IMPRESSIVE AND IF WE TAKE THE CASE OF SOYBEANS PRODUCTION FIGURES SOARED FROM 323 THOUSAND TONS IN 1963 TO 15.2 MILLION IN 1983. DUE TO THIS FACT, BRAZIL WAS ABLE TO INCREASE SIGNIFICANTLY ITS AGRICULTURAL EXPORTS WHICH EXCEEDED 8 BILLION DOLLARS IN 1983, WITH SOYBEANS ALONE REPRESENTING 2.5 BILLION DOLLARS.

NOTWITHSTANDING THIS FACT, THE DEVELOPMENT OF THE AGRICULTURAL SECTOR IN BRAZIL, WHICH HAS BEEN A GOVERNMENTAL PRIORITY FOR A NUMBER OF YEARS, PRESENTED IMPORTANT DISTORTIONS WHICH HAD TO DO WITH THE EXCESSIVELY FAVOURABLE CREDIT TERMS AND SUBSIDIZED INTEREST RATES WHICH CAUSED A VERY LARGE INCREASE IN



GOVERNMENT EXPENDITURE AGGRAVATING PUBLIC DEFICIT. ACCORDING TO SOME SOURCES THE AMOUNT OF SUBSIDIES FOR THE AGRICULTURAL SECTOR IN 1980 WAS RECKONED AT 4 BILLION DOLLARS, IF WE INCLUDE THE CONSUMER SUBSIDY FOR WHEAT WHICH REACHED ITS PEAK IN THAT PARTICULAR YEAR.

FOR THE REASONS DESCRIBED, SINCE THE BEGINNING OF THE DECADE, THE BRAZILIAN GOVERNMENT PURSUES A POLICY OF GRADUALLY ELIMINATING SUBSIDIES THAT PREVIOUSLY PERMEATED ALL THE AGRICULTURAL SECTOR WHICH, SURPRISINGLY ENOUGH, CONTINUED TO EXPAND, A FACT WHICH IN PART CAN BE ATTRIBUTED TO SATISFACTORY WEATHER CONDITIONS IN THE LAST TWELVE MONTHS. IN COMPARISON TO LAST YEAR'S CROP, BRAZIL WILL SHOW THIS YEAR AN INCREASE IN THE PRODUCTION OF THIRTEEN FOOD PRODUCTS AND A REDUCTION IN ONLY THREE, WHEAT BEING ONE OF THEM.

OVER THE LAST TEN YEARS, WHEAT CONSUMPTION HAS SHOWN A MARKED INCREASE IN BRAZIL - A FACT THAT CAN BE EXPLAINED BY SOME IMPROVEMENT IN THE STANDARDS OF LIVING OF URBAN POPULATIONS BUT ALSO BY THE VERY LARGE CONSUMER SUBSIDY WHICH WAS INTRODUCED IN 1972. IN THE WAKE OF THE DRAMATIC INCREASE OF INTERNATIONAL PRICES IN THAT YEAR, THE BRAZILIAN GOVERNMENT WAS FORCED TO TAKE MEASURES IN ORDER TO PRESERVE THE DOMESTIC CONSUMER FROM THE VAGARIES OF INTERNATIONAL MARKET, A DECISION WHICH PRESENTED SOME POLITICAL JUSTIFICATION BUT WHICH BROUGHT ABOUT SOME FAR-REACHING ECONOMIC CONSEQUENCES. TO GIVE AN IDEA OF THE EXTENT OF THE PHENOMENON, BRAZILIAN WHEAT CONSUMPTION INCREASED FROM 3.3 MILLION TONS IN 1972 TO 6.8 MILLION TONS IN 1980 AND, IN THE SAME PERIOD, IMPORTS WERE UP FROM 2.7 MILLION TO 4.6 MILLION TONS.



IN 1980, THE CONSUMER SUBSIDY REPRESENTED 85% OF THE COST OF A TON OF WHEAT SOLD TO MILLERS AND GOVERNMENT EXPENDITURE REACHED THE ALL-TIME RECORD FIGURE OF ONE BILLION DOLLARS. SINCE THEN, SOME PROGRESS HAS BEEN ACHIEVED IN THE IMPLEMENTATION OF A POLICY AIMED AT GRADUALLY PHASING OUT THE SUBSIDY. DURING THE 1980/1984 PERIOD, PRICES OF A TON OF WHEAT SOLD TO MILLERS WERE INCREASED, IN REAL TERMS, BY 340% BUT DUE TO THE INFLATIONARY IMPACT OF SUCH MEASURES, THE DEADLINE OF JUNE 30, 1984, PREVIOUSLY SET UP FOR THE COMPLETE ELIMINATION OF THE SUBSIDY, HAD TO BE POSTPONED TO THE END OF THIS CALENDAR YEAR. IT IS INTERESTING TO NOTICE THAT, IN SPITE OF THIS POLICY, BRAZILIAN WHEAT CONSUMPTION DECLINED ONLY 11.5% FROM 6.8 MILLION TONS IN 1980 TO THE 6.1 MILLION ESTIMATED FIGURE FOR 1984 AND, DUE TO REDUCED DOMESTIC CROPS, IMPORTS WERE DOWN LESS THAN 3% FROM 4.6 MILLION IN 1980 TO THE 4.5 MILLION ESTIMATED FOR THIS YEAR.

THIS IS A VERY IMPORTANT POINT BECAUSE IN THE COURSE OF THE ADJUSTMENT PROCESS BRAZILIAN ECONOMY IS NOW UNDERGOING, SOME TRENDS SEEM TO EMERGE AND I WOULD THINK THAT SOME OF THEM WILL HAVE A BEARING TO BRAZIL'S STANCE IN THE INTERNATIONAL WHEAT MARKET.

IN SPITE OF BALANCE OF PAYMENTS CONSIDERATIONS, ALWAYS PRESENT IN CASES OF COUNTRIES LIKE BRAZIL WITH A LARGE EXTERNAL DEBT, IT SEEMS NO LONGER LIKELY THAT BRAZIL WILL PURSUE A POLICY OF INCREASING, AT ANY COST, ITS DOMESTIC WHEAT PRODUCTION WHICH MOST PROBABLY WILL BE STABILISED AT THE 2 TO 3 MILLION TONS RANGE. EXPERIENCE HAS SHOWN THAT INCREASING THE ACREAGE IMMODERATELY IN THE TRADITIONAL PRODUCING AREAS HAS THE EFFECT OF INCORPORATING



TO PRODUCTION AREAS WHICH ARE NOT SUITABLE FOR THE CROP WITH CONSEQUENT INCREASE OF GOVERNMENT DISBURSEMENTS WITHIN THE FRAMEWORK OF THE CROP INSURANCE PROGRAMS WHICH EXIST IN BRAZIL. SOME SMALL ACREAGE INCREASES ARE EXPECTED IN THE CENTRAL PART OF THE COUNTRY, BUT SINCE IN THAT AREA IRRIGATION IS REQUIRED THERE WOULD BE LIMITS FOR SUCH EXPANSION. NOWADAYS, THE PRICE FOR DOMESTICALLY PRODUCED WHEAT IS US \$225.00. A FIGURE WHICH IS ROUGHLY TEN PER CENT ABOVE THE COST OF A TON OF IMPORTED WHEAT DELIVERED AT THE DOOR OF THE MILL. EVERYTHING TENDS TO INDICATE THAT THIS LEVEL OF PROTECTION IS NOT LIKELY TO BE INCREASED IN FUTURE YEARS DUE TO THE CONTINUING NEED OF CURBING DOWN GOVERNMENT EXPENDITURE.

SO IT CAN BE FORESEEN THAT BRAZIL, BY MAKING USE OF ITS COMPARATIVE ADVANTAGES, WILL EXPAND ITS OUTPUT OF AGRICULTURAL PRODUCTS SUCH AS COFFEE, COCOA, SOYBEANS, SUGAR CANE AND COTTON, BUT WILL CONTINUE TO BE A SIGNIFICANT WHEAT IMPORTER. THUS, IT WOULD BE OF UTMOST IMPORTANCE FOR COUNTRIES LIKE BRAZIL, WHICH WOULD TEND TO PURSUE TRADE-ORIENTED FOOD POLICIES, THAT A GREATER DEGREE OF PRICE STABILITY BE ACHIEVED IN THE INTERNATIONAL WHEAT MARKET.

FOR THE LAST TEN YEARS, WHEAT REAL PRICES HAVE REACHED LEVELS WHICH REPRESENT BOTH HIGHS AND LOWS WHICH HAVE NO PARALLEL SINCE WORLD WAR I. THE DISRUPTIVE EFFECTS OF THIS FACT HAVE BEEN EXTENSIVELY DESCRIBED AND ITS IMPORTANCE IS ENHANCED WHEN ONE CONSIDERS THE FACT THAT 50% OF THE WHEAT TRADED INTERNATIONALLY IS IMPORTED BY DEVELOPING NATIONS.



TO SECURE AN ORDERLY EXPANSION FOR THE PRODUCTION AND TRADE OF THIS VERY IMPORTANT COMMODITY, IT SEEMS ADVISABLE THAT NATIONAL POLICIES SHOULD MOVE IN THE SAME DIRECTION AND, AS POINTED OUT BY SOME OF THE SPEAKERS WHO PRECEDED ME, SOME KIND OF CO-ORDINATION AT THE INTERNATIONAL LEVEL SHOULD BE SOUGHT IN ORDER TO PREVENT EXCESSIVE VARIATIONS, BOTH IN THE VOLUME PRODUCED AND IN PRICES AT WHICH WHEAT IS TRADED.

I AM FULLY AWARE THAT CHANGES IN PRODUCTION PATTERNS ARE NOW MUCH MORE DIFFICULT TO BE INTRODUCED THAN IN ANY OTHER MOMENT IN RECENT HISTORY. IN TIMES OF GLOBAL ECONOMIC CRISIS, IT IS ONLY NATURAL THAT GOVERNMENTS WOULD HESITATE TO EMBARK ON POLICIES WHICH WOULD ENTAIL A TEMPORARY DECREASE OF THE INCOME OF THE FARM SECTOR. BUT, IN THE INTEREST OF BOTH EXPORTING AND IMPORTING COUNTRIES, SOMETHING MUST BE DONE ABOUT IT, SINCE THE SITUATION OF OVERSUPPLY WE ARE FACING NOW BRINGS WITH IT THE PROSPECT OF FUTURE SCARCITY IF INTERNATIONAL PRICES OF WHEAT CONTINUES TO SLACKEN.

FOR COUNTRIES, LIKE BRAZIL, THE POSSIBILITY OF SUPPLEMENTING DOMESTIC FOOD PRODUCTION THROUGH WHEAT IMPORTS MADE AT FAIR AND REASONABLE PRICES CONSTITUTES A VERY IMPORTANT TARGET SINCE IT PERMITS TO IMPROVE THE PROTEIN CONTENT OF THE DIET OF MILLIONS OF PEOPLE LIVING IN BRAZILIAN CITIES. FOR THIS POLICY TO SUCCEED, IT WOULD SEEM NECESSARY THAT MORE CONSULTATION BETWEEN EXPORTING AND IMPORTING NATIONS TAKE PLACE IN THE VERY NEAR FUTURE BECAUSE THE TENSIONS WHICH HAVE BEEN ACCUMULATING IN THE INTERNATIONAL WHEAT MARKET APPEAR TO BE REACHING A DANGEROUS POINT.

LET US HOPE THAT THE ENSUING DEBATE CAN BRING SOME LIGHT TO THIS VITAL QUESTION.





# *The Grains Challenge*

Wheat and other food grains are as essential to the well being and security of the world today as they have been throughout history. All countries, regardless of their size, location, stage of development, economic or political system, have a vital interest in these essential commodities. The production, trade and aid flow of food grains is influenced by major events in all parts of the world and, in turn, often affect the evolution of these events. In each country, Government policies strongly influence the grain sector and today in an increasingly complex and rapidly changing world, Government policies continue to be critical to the future for grain.

During the past 50 years, Governments have sought, through discussion and negotiation, to improve the environment for grain production and trade. The issues in 1984 are no less numerous, sharp or challenging than at any time in the past. Simultaneously, the world is experiencing grain surplus and shortage, bumper harvests and drought, low prices and lack of buying power, modern scientific farming and primitive agriculture. Governments must examine the future carefully to plan their policies as they influence grain production, distribution, trade, consumption and food security. The challenge is to anticipate the future and to develop policies to safeguard and encourage the vital food grains sector.

## *The Program*

The first session on the morning of June 28 will examine "The Global Environment of the Future" to provide a broad overview of developments likely to impact on the outlook for grains. Panel speakers drawn from many regions and interests will provide focus to the future with respect to resources, new technologies, food needs, the trading environment and international financing.

The second session, the afternoon of June 28, will examine "World Grain Trade Beyond 2000" to provide a framework for discussing the future for grain from the perspective of producers, importers, exporters, processors, handlers and shippers.

# *Le défi à relever*

Aujourd'hui comme hier, le blé et d'autres céréales sont indispensables au bien-être et à la sécurité de la population du globe. Tous les pays, quels que soient leur superficie, leur situation géographique, leur niveau de développement et leur système économique ou politique, portent un intérêt vital à ces denrées essentielles. La production des céréales, leur commerce et leur fonction d'aide alimentaire subissent les effets de la conjoncture mondiale et influencent souvent à leur tour le cours des événements. Les politiques gouvernementales de tous les pays se répercutent sur le secteur des grains et, dans un monde qui évolue à toute vitesse et se complexifie sans cesse, restent déterminantes pour l'avenir de ce secteur.

Au cours des cinquante dernières années, maints gouvernements ont entamé des pourparlers et des négociations en vue d'améliorer la production et le commerce des grains. En 1984, la situation n'est pas moins complexe, les questions moins aigues ni les défis moins prenantes que par le passé. Simultanément, on fait face dans le monde à des surplus de céréales et à la pénurie, à des récoltes surabondantes et à d'autres dévastées par la sécheresse, à des prix très faibles et à un pouvoir d'achat réduit au minimum, à des méthodes d'agriculture scientifiques modernes et à d'autres primitives. Les gouvernements doivent sonder l'avenir avec prudence avant de planifier des politiques dont l'influence se fera sentir sur la production, la distribution, la consommation et le commerce des céréales ainsi que la sécurité alimentaire. Le défi consiste à anticiper cet avenir et à élaborer des politiques propres à sauvegarder et à développer le secteur vital des céréales.

## *Le programme du Forum*

La première séance du 28 juin, en matinée, porte un "Regard sur l'avenir" et tentera de donner une vue d'ensemble des événements susceptibles d'influer sur le secteur céréalier. Des orateurs de divers pays et secteurs d'activité tenteront de projeter l'avenir des ressources, des nouvelles technologies, des besoins alimentaires, des échanges commerciaux et du financement international.

Au cours de la deuxième séance, soit celle de l'après-midi, on se penchera sur "Les céréales dans le monde après l'an 2000" afin d'établir une grille qui servira à étudier l'avenir du secteurs du point de vue des producteurs, importateurs, exportateurs, personnes chargées de la transformation, manutentionnaires et expéditeurs.

The third and final session, on the morning of June 29, will consider "Future Directions for Policy" as a framework within which Council members and invited participants can consider national plans and programs in the global context. Panel speakers will comment on policies as they relate to production of grains, consumption, food aid and food security and international co-operation in grains.

## *The International Wheat Council*

The International Wheat Council is composed of members of the current International Wheat Agreement. There are 60 member countries and the Council meets twice annually with special sessions when required. The Council will hold its 100th Session in Ottawa June 25-27, 1984.

The current International Wheat Agreement 1971 consists of two separate legal instruments, the Wheat Trade Convention and the Food Aid Convention. The Council is responsible for administering the Wheat Trade Convention. A Food Aid Committee, which will meet in Ottawa on June 27, administers the Food Aid Convention. Both Conventions have been extended to June 30, 1986.

The main objectives of the Wheat Trade Convention are to further international co-operation with respect to world wheat problems, to promote the expansion of international trade in wheat and wheat flour and to contribute to the stability of the international wheat market. The Council is also the body which considers the future basis for new international arrangements.

Under the Food Aid Convention 1980, donor countries are committed to provide 7.6 million tonnes of grains annually as food aid. The Food Aid Committee also meets twice annually to administer the Convention. It examines donor obligations under the Convention, reviews the food situation in developing countries and encourages co-operation in food aid matters.

La troisième et dernière séance, qui aura lieu le 29 juin au matin, portera sur "L'orientation des politiques futures" et constituera un cadre général à l'intérieur duquel les membres du Conseil et les participants invités pourront examiner leurs plans et programmes nationaux. Les orateurs parleront du rapport qui existe entre les politiques et la production et la consommation céréalières, l'aide alimentaire, la sécurité alimentaire et la coopération internationale en matière de céréales.

## *Le Conseil international du blé*

Le Conseil international du blé regroupe les pays — au nombre de 60 — qui ont signé l'Accord international sur le blé actuellement en vigueur. Le Conseil se réunit deux fois par année et organise parfois au besoin des séances extraordinaires. Le Conseil tiendra sa 100<sup>e</sup> séance à Ottawa du 25 au 27 juin 1984.

Le plus récent Accord international sur le blé, soit celui de 1971, possède deux instruments juridiques distincts: la Convention relative au commerce du blé et la Convention relative à l'aide alimentaire. Le Conseil est chargé d'appliquer la Convention relative au commerce du blé et un Comité de l'aide alimentaire, qui se réunira à Ottawa le 27 juin, applique la Convention relative à l'aide alimentaire. Les deux conventions ont été prolongées jusqu'au 30 juin 1986.

Les principaux objectifs de la Convention relative au commerce du blé sont d'intensifier la coopération internationale pour résoudre les problèmes de blé à l'échelle mondiale, de manière à promouvoir l'expansion du commerce international du blé et de la farine du blé et à contribuer à la stabilité du marché international à cet égard. Le Conseil est également l'organisme chargé d'étudier les bases des nouvelles ententes internationales.

En vertu de la Convention relative à l'aide alimentaire de 1980, les pays donateurs se sont engagés à fournir une aide annuelle de 7,6 millions de tonnes de céréales. Le Comité de l'aide alimentaire se réunit lui aussi deux fois par année pour des fins d'application de la Convention. Il se penche sur la situation alimentaire dans les pays en voie de développement, étudie la façon dont les membres remplissent leurs obligations en vertu de la Convention et encourage la coopération en matière d'aide alimentaire.

## *Conference Arrangements*

Participation in the Centennial Forum is by invitation to all delegations and observers to the IWC 100th Session and to representatives from selected producer, trade and international organizations.

The Centennial Forum will take place in Canada's Capital Congress Centre beginning at 9 a.m., Thursday, June 28 and ending at noon June 29. Each session will commence with an address by the keynote speaker, followed by presentations on selected grain related subjects. The speakers will form a panel for discussion involving symposium participants. Simultaneous interpretation will be provided in the four languages of the Council — English, French, Spanish and Russian. A record of the proceedings will be published at a later date.

Participants may collect symposium documents at the registration desk in the Congress Centre from 3 to 6 p.m. on Wednesday, June 27 and from 7 to 8:30 a.m. on June 28. A reception and dinner hosted by the Canadian Government to honour the 100th Session and the Centennial Forum will be held on the evening of June 27.

Program details including activities associated with the Symposium will be provided in advance to all participants and will also be available on registration.

Hotel reservations for Council members and observer delegations should be made through the International Wheat Council Secretariat, Haymarket House, 28 Haymarket, London, SW1Y4SS, England (Telephone 01-930-4128, Telex 916128). Hotel reservations for all other participants in the Symposium should be made through the Symposium Coordinator, c/o the Grains Group, Department of External Affairs, 235 Queen St., Ottawa, Ontario, Canada, K1A 0G2 (Telephone (613) 995-7127, Telex 053-3745).

## *Renseignements généraux sur le Forum du Centenaire*

Tous les délégués et observateurs participant à la 100<sup>e</sup> séance du Conseil international du blé ainsi que des représentants d'organismes producteurs et d'organismes commerciaux ou internationaux choisis seront invités à participer au Forum du Centenaire.

Le Forum du Centenaire se tiendra au Centre des Congrès de la capitale du Canada. Il débutera le jeudi 28 juin à 9 h pour se terminer le vendredi 29 à midi. L'orateur principal ouvrira chaque séance par une allocution qui sera suivie de communications diverses portant sur les céréales. Les orateurs formeront ensuite une table ronde pour discuter de certains points avec les participants. Un service d'interprétation assurera la traduction simultanée vers les quatre langues de travail du Conseil, soit le français, l'anglais, l'espagnol et le russe. Les actes du colloque seront publiés à une date ultérieure.

Les participants peuvent prendre leur documentation pour le forum au comptoir d'inscription du Centre des Congrès entre 15 h et 18 h le mercredi 27 juin ou de 7 h à 8 h 30 le jeudi 28 juin. Le 27 en soirée, le gouvernement du Canada offre une réception et un dîner pour marquer la tenue de la 100<sup>e</sup> séance du Conseil et du Forum du Centenaire.

Tous les participants recevront à l'avance le programme détaillé du colloque et des activités connexes; ils pourront également se le procurer au moment de l'inscription.

Pour les réservations d'hôtel, les membres du Conseil et les observateurs s'adresseront au Secrétariat du Conseil international du blé, Haymarket House, 28 Haymarket, Londres, SW1Y4SS, Angleterre (téléphone 01-930-4128, télex 916128); tous les autres participants devront passer par le Coordonnateur du colloque, a/s Groupe consultatif spécial sur les céréales, Ministère des Affaires étrangères, 235, rue Queen, Ottawa (Ontario), Canada, K1A 0G2 (téléphone (613) 995-7127, télex 053 3745).







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